



339en08

ELECTRONIC RESOURCES

8.1 INTRODUCTION

The advent of Internet has dramatically changed the way people and institutions function. It has led to tremendous change in the way libraries function and offer services to their users. At present, the libraries actively procure, organize, display and issue e-forms of books, journals, newspapers, theses and dissertations. This is also due to change in information seeking behavior of users. The new generation of users prefer online resources as they want all information at the click of mouse. The e- resources have certain inherent characteristic features which offer convenience to the users. This lesson discusses the concept and importance of e-resources. It deals with different types of e-resources, their advantages and disadvantages.



8.2 OBJECTIVES

After studying this Lesson you will be able to:

- comprehend the definition and importance of e- resources;
- categorize different types of e-resources;
- define e- books and e- journals;
- understand the concept of electronic databases; and
- distinguish between bibliographic and full text databases.

8.3 E-RESOURCES

An e- resource is material which requires computer mediation in order to access its content and make it useful. Both online and offline resources such as CD-



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ROMs fall within the scope of e- resources. The term e-resource refers to all the products which a library provides through a computer network.

The electronic resources are also known as online information resources covering bibliographic databases, electronic reference books, search engines for full text books, and digital collections of data. They include both “born digital” material which has been produced directly online. For example-e- journals, databases, and print resources which have been scanned and digitized. The electronic resources, e-journals, online databases are not “owned” by the libraries as they own the print material. Ownership of electronic resources lies with the providers of these resources. Access to the electronic resources may be free via Internet or may be available against a fee.

Some of the examples of e- resources are magazines, encyclopedia, newspapers, journals or articles published in them. These may be accessed on Internet connected devices such as computers, tablets, smart phones, etc.

8.3.1 Advantages of e- resources

E- resources have many advantages; some of these are :

- E-resources may be accessed over the Internet. The users need not physically visit the library. This is very useful for the users who reside in remote and far flung areas. The users may download the articles and save them in their PCs.
- The same resource, i.e., article or journal may be accessed by many users at the same time.
- E-resources may be accessed from anywhere, anytime as per the convenience of the users.
- The users may search a large number of resources in one go through a single search interface.
- E-Resources also provide usage statistics which help the library staff in finding out the usage of the product .
- Articles/issues of journals appear online before their print version is available.
- Hypertext format and links of e- resources lead users to related content and articles.
- Electronic resources have audio, video and animation content which is not present in print format.
- The subscription of e- resources helps libraries in saving space.



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8.3.2 Disadvantages of e- resources

- The readers need to have access to Internet in order to read electronic resources.
- If a library cancels or stops subscription to an e-journal, it is not certain that the library will get access to back issues of that journal. Whereas, library having printed material certainly has back issues of that journal in its possession. In case of e-books too, if a library stops subscription to e-books, it is denied access to the e- book. Whereas the physical copy once bought always remains in the possession of the library.
- Use of e- resources entails reading on screen which is tedious and harmful too.

8.3.3 Managing e-resources

The management of e- resources involves the following:

Selection

E-resources may be selected by any of the following methods:

1. Serendipity (finding by chance something which is useful and beneficial) while surfing the Internet
2. Faculty recommendations
3. Reviewing the electronic journals provided by other libraries
4. Publisher advertisements

Acquisition

A Library acquires print resources for ownership. But for electronic resources, the libraries simply get license for access rights. Some important activities involved in acquisition of e- resources are as under:

1. Determining the price
2. Negotiating with the vendor
3. Completing the licensing agreement
4. Allocation of funds
5. Placing the order
6. Verifying if the title is accessible
7. Communicating with the vendor if it is not accessible
8. Processing the invoice for payment



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Staffing

The library has to decide if acquisition functions for e-journals will be performed by the regular staff or staff with expertise in dealing with electronic format. In order to acquire and process electronic resources, the staff requires the skill of negotiating licenses, familiarity with the electronic format, etc.

Licensing

A license is usually a written contract or agreement between the library and the publisher. An agreement has various aspects like method of calculating payment, definition of users, restriction on use, archival rights, etc. Licensing agreements are generally written for the vendors' advantage, so the library staff has to be extra careful to negotiate favourable terms for the library.

Budgeting

Libraries usually have a separate budget for procuring e-resources.

Cataloguing

E-resources are catalogued and details are entered in to library's OPAC. Some libraries may decide to list them on the website and provide their links. They may not catalogue them.

Maintenance

For e-resources, maintenance is an important issue. Library has staff to maintain e-resources. The staff ensures that the subscribed e-resources are accessible on IP (Internet Protocol) ranges of the institute. Some of the e-resources are accessible through Username (UN) and Password (PW). The staff is entrusted with the responsibility of distributing UN/PW to the authorized users. In case, an e-resource is not accessible and the staff cannot resolve the problem, the same is communicated to the publisher to resolve the problem.

Staff Training and User education

The staff has to be trained in accessing, browsing and retrieving information from e-resources. Libraries need to conduct user education programmes in order to teach the users how to use e-resources and thus promote and enhance the use of e-resources among the users.

8.3.4 Categories of E-Resources

There are different types of e-resources as mentioned below:

- E-journals
- E-Books



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- Electronic databases
- E-reports
- E-Theses and dissertations
- Institutional repositories

These have been dealt with in the following sections.

8.4 E- JOURNALS

An e-journal has been defined as a periodical publication which is published in electronic format usually on the Internet. A periodical publication means that it has some periodicity i.e., It may be published weekly, fortnightly, monthly, quarterly or annually. The term electronic journal has been used for the following:

- An electronic version of an established print journal like *Cell*, *New Scientist*, *Scientific American*, etc.
- An e- only journal like *Ariadne*, *D-Lib magazine*, etc.
- An established journal could stop its print version and transfer to e- only format.
- An electronic journal can be free or fee based through annual subscription, licensing or pay per use.

The screenshot of Nature journal is given below:



Fig. 8.1 Snapshot of Nature journal

Source: http://www.nature.com/nature/current_issue.html



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8.4.1 Advantages of E-journals

E- journals have the following advantages :

- can be accessed from anywhere and any time;
- can be searched non sequentially using keywords;
- additional content is provided which may not be available in print;
- storage and binding concerns are eliminated; and
- back issues can also be accessed with the current ones.

8.4.2 Disadvantages of E-journals

Same as for e- resources given at 8.3.2.

8.4.3 Library consortia

Libraries procure subscription to e- journals through consortia in order to save on money. In this consortia approach, libraries form an association or network or cooperative organization to procure and share journals. Some of the examples of consortia which provide access to e- resources are as under:

DeLCON-Electronic Library Consortium-(delcon.gov.in)

UGCInfoNet digital Library consortium(<http://www.inflibnet.ac.in/econ/>)



INTEXT QUESTIONS 8.1

1. What is an e- resource?
2. State at least three advantages of e- resources.
3. List at least two disadvantages of e- resources.

8.5 E- BOOKS

An e- book, also known as electronic or digital book is a text and image based publication in digital form. It is produced or published to be read on computer or other digital devices. E- Books are the digital equivalent of standard printed books. E-books are available in a wide variety of formats. Some may be downloaded in full to be read offline, whereas others may only be read online while connected to the Internet.



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8.5.1 Advantages of e-books

The advantages of e- books are listed as under:

- Can be accessed from anywhere and any time
- The readers may make notes, save and print a number of relevant pages
- The books may be searched for keywords.
- Access the video and audio content
- The problem of space and storage in libraries is reduced or eliminated
- E- books also eliminate damage, loss and security concern
- Old titles do not go out of print
- Low production, shipping and handling charges.

8.5.2 Disadvantages of e-books

- The libraries have to procure more number of licenses in order to provide their access to more number of users.
- E- books require power or electricity to be accessed. In case, there is power shortage, the users cannot access the book.
- The publishers use DRM (Digital Rights Management) software to control access to e- books. This limits the ability of the users to share an e- book with others.



INTEXT QUESTIONS 8.2

1. What is an e- book?
2. Write the advantages of e- books

8.5.3 Accessing or using e- books

E-books are supplied by different publishers and suppliers. The access models, terms and conditions of use may differ from publisher to publisher.

- There are different kinds of suppliers and business models for e-books in the market. The business models refer to the various options offered by publishers and vendors to sell e- books to the libraries.
- The number of users who can use an e-book at the same point of time



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may vary from publisher to publisher. The e-books open on a first come first served basis.

- E-Books are subject to strict copyright laws and digital rights management. Copyright laws allow users to print or copy one chapter or 5% of an e-book whichever is greater. Most publishers restrict the amount you can print or copy and some publishers don't allow users to copy or print. Some publishers allow e-books to be downloaded for a fixed period only.

In order to access the e-books the users must have the following:

- Internet connectivity
- Up to date Internet browser such as Internet explorer, Chrome, or Firefox
- An up to date version of Adobe Acrobat Reader as most e-books use PDF files (this is the format in which the e-books are displayed).
- E-Books may be read on computer or may be transferred to any other reading device like Kindle, Android, ipad, iPhone, Kobo, e-book reader, Nook (it is an e-book reader which has been developed by an American book retailer Barnes and Noble), Sony Reader, etc.
- The library pays for access to e-books which are hosted on a third party website. When a user wants to access an e-book, he downloads a file which automatically expires after some days. It is just like a user visiting a physical library for getting a book issued for a week or two, after which the same has to be returned to the Libraries.

Some of the examples of suppliers of e-books are given as under:

- Mylibrary (<http://www.mylibrary.com/>)
- E-brary (<http://www.ebrary.com/corp/index.jsp>)
- EBSCO (<http://www.ebscohost.com/ebooks/home>)
- Springer (<http://www.springer.com/librarians/e-content/ebooks?SGWID=0-40791-0-0-0>)

Springer offers access to more than 88,000 e-books through Springer Link. Libraries can either purchase the entire annual collection or may purchase a number of subject collection as per their requirements. For getting individual titles, libraries have to contact the aggregators or online stores like amazon.com or springer shop at springer.com. The screenshot of the Springer homepage is given as under:



Fig. 8.2 Snapshot of Springer website

Source: <http://www.springer.com/librarians/e-content/ebooks?SGWID=0-40791-0-0-0>

Oxford University Press provides access to 8000 academic monographs from twenty subject areas, including humanities, social sciences, medicine, law, etc. The platform is popularly known as Oxford Scholarship Online. The collection is regularly updated with new titles, three times a year.

The screenshot of Oxford Scholarship Online is given as under:

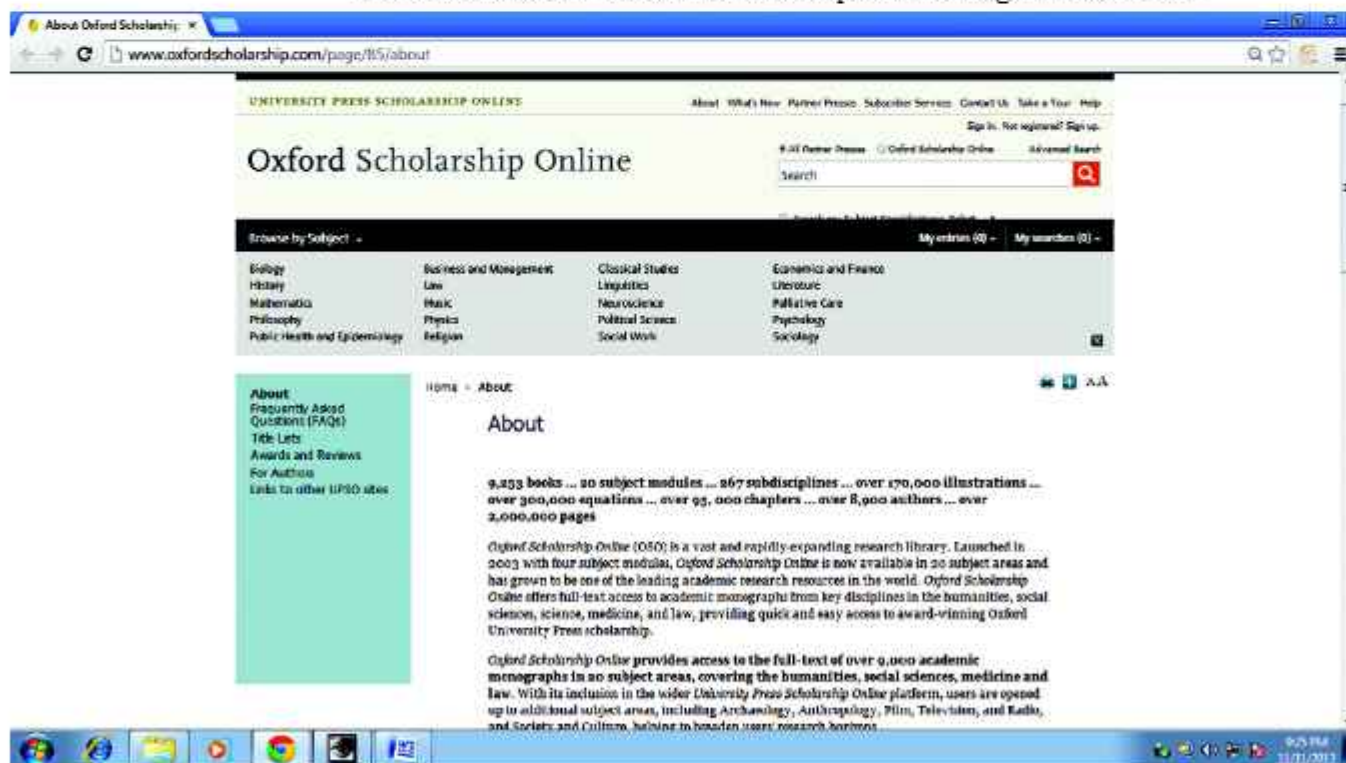


Fig. 8.3 Snapshot of Oxford Scholarship Online



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Source :<http://www.oxfordscholarship.com/page/85/about>

Safari Technical Books Safari provides 8000 e-books from over 100 publishers, specializing in computer application user and training manuals. <http://www.safaribooksonline.com/mkt/brochures/html/WhoWeAre.html>

There are many e- books freely available on the internet. Some of them are given as under :

- CARRIE: Full Text electronic Library (<http://vlib.iue.it/carrie/>)
- Free books (<http://www.e-book.com.au/freebooks.htm>)
- Internet Classics Archive (<http://classics.mit.edu/>)
- Internet Public Library (<http://www.ipl.org/>)
- Online Books Page (<http://digital.library.upenn.edu/books/>)
- Project Gutenberg (http://www.gutenberg.org/wiki/Main_Page)
- UC Press e- books Collection (<http://publishing.cdlib.org/ucpressebooks/>)

It is certain that e- books will not replace print books in the forthcoming years. The users, researchers and faculty members may rapidly adopt them as complementary to print books. The users value the convenience and ease of accessibility that e- books provide. It is estimated that in the next five years the users, researchers and faculty members will prefer the electronic version of some books-the transition will be faster for research related activities. E-Books are appropriate for research purposes or in a search environment where the user needs to locate specific information. The users do not read e-books cover to cover in the traditional sense, rather they consult them as a resource for locating answers to research questions.



INTEXT QUESTIONS 8.3

1. Write the names of two publishers of e- books.
2. Discuss why printed books will not be replaced by e-books in all fields.

8.6 ELECTRONIC DATABASES

The term “database” is used to refer to a collection of records which may have numeric, textual or image based data. If it is accessible via WWW, it is known as online database. Before the advent of Internet, these online databases were available as CD-ROM databases. A journal database is a collection of journal



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articles arranged in individual records which can be searched. The databases can be bibliographic or full text ones.

8.6.1 Bibliographic databases

A bibliographic database is a database of bibliographic records; it is an organized digital collection of references to published literature. It may be general in nature or may be in a particular subject area. **J-Gate**<http://j-gate.informindia.co.in>. is a bibliographic database which provides access to journal literature, indexed from 29513 e- journals of 9483 publishers with links to full text at publishers' sites. The database is accessible against a fee. All the electronic databases provide citations, which give the readers the basic publication information about the article or resource- such as, title, authors, date and source of publication.

The majority of the databases which provide citations also have abstracts, which are brief summaries of the article or resource. The users and researchers can learn a lot about an article just by carefully reading the citation and the abstract; this in turn will help them decide whether they want to read the full article or not. In simple words, the abstracts are very popularly used by the researchers as they offer a quick and effective means of checking relevance and comparing articles from the voluminous literature available in a particular discipline; in certain cases they may offer appropriate substitute for the whole research article. Some other examples are as under:-

- **Abstract on Hygiene and Communicable Disease (AHCD)**

<http://www.cabi.org/default.aspx?site=170&page=1016&pid=70>

- **Current Contents**

http://thomsonreuters.com/products_services/science/science_products/a-z/current_contents_connect/

8.6.2 Full text databases

The databases which provide full text of journal articles, book chapters, conference papers etc. are known as full text databases. Examples are Science Direct, JSTOR and PROQUEST. Full text access means that the users can view, save or print the full text article. The full text article can be in HTML or PDF format. The advantages of full text databases are as under:

- Save the time of user in locating full text of an article
- Meet users' expectations by offering the full text of material they see indexed in secondary journals



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- Ensure users to have access to the very latest research
- Contain the full volumes including back issues of a growing number of journals.

Wiley Online Library is a multidisciplinary full text database of online resources from the fields of life, health, physical and social sciences. It provides access to over 4 million articles from 1500 journals, over 11,500 online books, reference works and laboratory works. The screenshot of Wiley Online Library is given below:

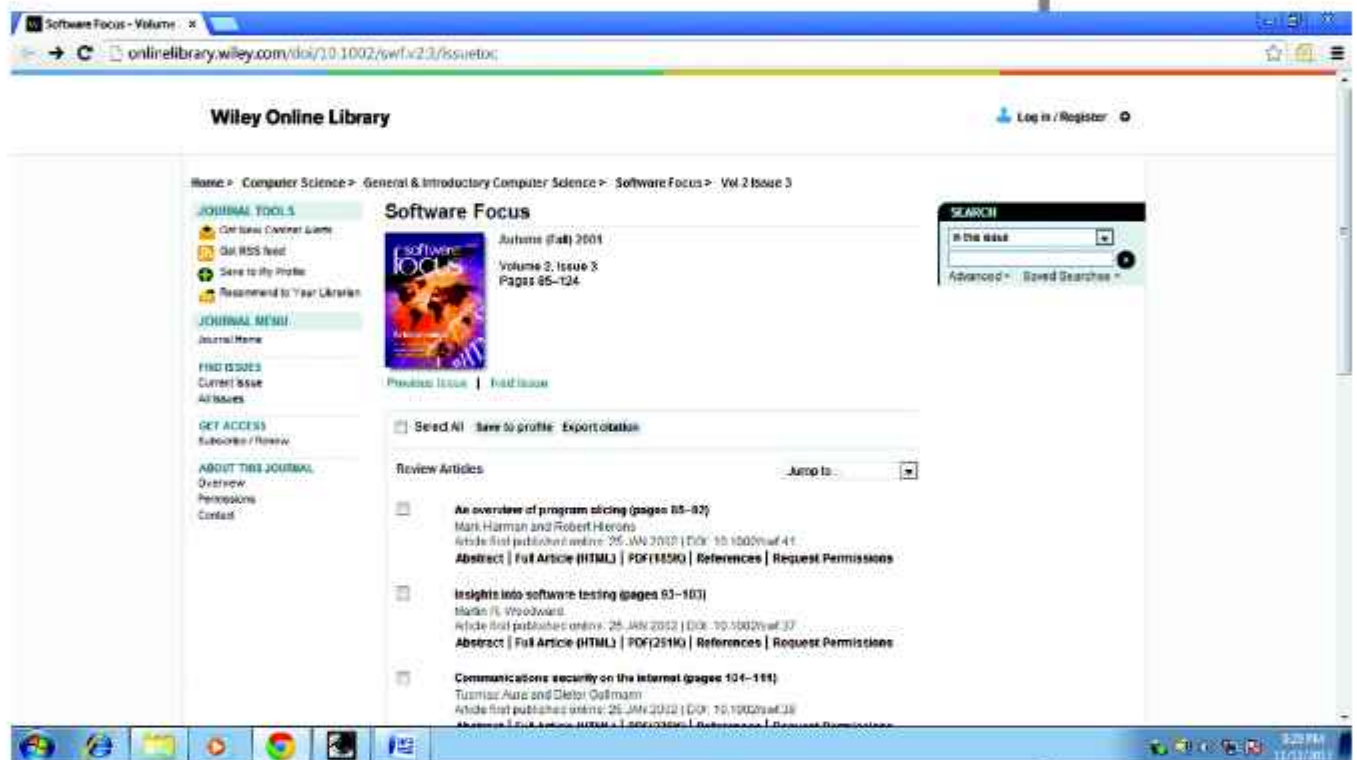


Fig.8.4 Snapshot of online library

Source: <http://onlinelibrary.wiley.com/doi/10.1002/swf.v2.3/issuetoc>

Other Examples:

- CABI full Text(<http://www.cabi.org/>)
- Academic search Complete (<http://www.ebscohost.com/academic/academic-search-complete>)
- JSTOR (<http://www.jstor.org/>)
- Project MUSE (<http://muse.jhu.edu/>)



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INTEXT QUESTIONS 8.4

1. What is an electronic database?
2. What is a bibliographic database?
3. How do citations and abstracts assist researchers?

8.7 E- REPORTS

A report is a document which contains information in a narrative, graphic or tabular form; it is prepared on adhoc, periodic or regular basis as per requirement. A report may refer to some specific period or event or subject. It may be communicated to the public orally or in written form. A report which is available in digital form is known as an e- report.

For example, the universities publish annual reports which give an account of their budget, expenditure, activities and achievements. These reports are also made accessible on Internet.

The screenshot of annual report of Jawaharlal Nehru University is given as under:



Fig. 8.5 Snapshot Jawaharlal Nehru University website

Source: <http://www.jnu.ac.in/AnnualReports/>



The Planning Commission, Government of India publishes reports of the various projects initiated and completed, committees constituted for accomplishing various tasks. The screenshot of reports published by Planning commission, Government of India is given as under:



Fig. 8.6 Snapshot Planning Commission of India website

Source: http://planningcommission.nic.in/reports/genrep/index.php?repts=b_repgen.htm

8.8 E-THESES AND DISSERTATIONS

A thesis or dissertation is a document submitted in support of candidature for an academic degree or professional qualification. It presents work or research, undertaken by a student, and its results or findings. The users submit theses and dissertations to the universities/institutions in print. The digital form of theses and dissertations are known as e-theses and dissertations. The research scholars doing M.Phil and PhDs in Indian universities are required to submit digital or soft copies of their theses and dissertations. The libraries are at present



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digitizing the theses and dissertations held by them and making them accessible on Internet. The collection of digital theses and dissertations is also known as digital repository. The screenshot given below shows the digital repository of Indian Institute of Science, Bangalore.



Fig. 8.7 Snapshot Institute of Science website

Source: <http://etd.ncsi.iisc.ernet.in/>

Other examples are as under:

The Shodhganga@INFLIBNET Centre provides a platform for research students to deposit their Ph.D. theses and make it available to the entire scholarly community in open access. The repository has the ability to capture, index, store, disseminate and preserve e-thesis and dissertations submitted by the researchers.

Vidyanidhi: Indian digital library of electronic theses by University of Mysore

8.9 INSTITUTIONAL REPOSITORIES

An institutional repository is an online database which provides access to the digital collections of theses, dissertations, e-prints etc., of a particular institution for online viewing. It provides associated metadata regarding the document, i.e., name of the student, university name, year of graduation, document title, abstract, keywords, etc. Institutional repositories are also known as digital repositories. The universities and research institutions set up these repositories to collect, organize and showcase the intellectual contribution of their faculty members and scientists. These institutional repositories may also provide access to annual reports, question papers of the past years, preprints of the articles published by the teachers and scientists of the university and institute. The screenshot of the institutional repository, known as e-prints@IISc, of Indian Institute of Science is given below:



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The screenshot shows the ePrints@IISc website. The header includes the site name and navigation links. The main content area features a search bar, a 'Welcome to ePrints@IISc' message, and a list of recent submissions. The list includes articles such as 'Seismic Bearing Capacity of Foundations on Cohesionless Slopes' by Kumar, Jyanti and Chakraborty, and 'Influence of Spatial Variation of Hydraulic Conductivity of Municipal Solid Waste on Performance of Bioreactor Landfill' by Reddy, Krishna R and Kulkarni, Hanumanth S and Srivastava, Arnt and Babu, Sivakumar GL.

Fig. 8.8 Snapshot online database of thesis and dissertations

Source: <http://eprints.iisc.ernet.in/>



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WHAT YOU HAVE LEARNT

The advent of Internet has brought a paradigm shift in the way the libraries procure, organize and disseminate information resources.

- Libraries are actively procuring e- resources, besides the print collection for their users. The users prefer e- resources because of the convenience which they offer to them.
- The e- resources can be accessed from anywhere. Large number of resources can be searched in one go through a single search interface; hypertext and links in e- resources further lead the users to the related content.
- Some of the e- resources are e- journals, online databases and e- books.
- There are publishers, vendors and aggregators who provide e- resources to the libraries through different business and access models.
- While the printed resources are owned by the libraries, e- resources are not owned by the libraries. Libraries only have access rights for them.



TERMINAL QUESTIONS

1. Discuss different e- resources with examples.
2. Explain with examples the difference between a full text and bibliographic database
3. Define institutional repositories and give examples.
4. What are e-theses and dissertations? Explain with examples.
5. How are e- resources managed in libraries?



ANSWERS TO INTEXT QUESTIONS

8.1

1. An e- resource is any information source which is accessible in an electronic format. The examples of e- resources may be e- journals, databases, newspapers, magazines etc. It requires computer mediation in



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order to access its content and make it useful. Both online and offline resources such as CD-ROMs fall within the scope of e- resources.

2. The advantages of e- resources are as under:
 - (i) E- resources may be accessed over the Internet from anywhere in the World. The users need not physically visit a library. This is very useful for the users who reside in remote and far flung areas. The users may download the articles and save them in their PCs.
 - (ii) The same resource- article, journal may be accessed by many users at the same time.
 - (iii) E- resources do not require any physical space for storing like printed resources, which require too much space for storing them.
3. The disadvantages of e- resources are as under :
 - (i) The readers need to have access to Internet in order to read electronic resources. If a reader does not have Internet connectivity, he cannot access or read electronic resources.
 - (ii) If a library cancels or stops subscription to an e- journal, it is not certain that the library will get access to back issues of that journal. On the other hand when library stops subscription for the printed Journals, the library of e- books too, if a library stops subscription to e- books, it is denied access to the e- book, whereas the physical copy once bought always remains in the possession of the library.

8.2

1. An e-book, also known as electronic or digital book is a text and image based publication in digital form. It is produced or, published to be read on computer or other digital devices.
2. The advantages of e- books are as under:
 - I. They can be accessed both from on and off campus.
 - II. The problem of space in libraries is eliminated.

8.3

1. The publishers of e- books are as under:
 - i. Springer : <http://link.springer.com/>
 - ii. Taylor and Francis: <http://www.tandfebooks.com/>



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2. E-books are used more by researchers because of their convenience to access and search information even the very latest. In other fields, printed books are still very popular.

8.4

1. The Electronic databases which provide access to the full text of the articles published in journals are known as full text databases. JSTOR <http://www.jstor.org/> is an example of full text database .
2. A bibliographic database is a database of bibliographic records; it is an organized digital collection of references to published literature. It may be general in nature or may be in a particular subject area.
3. Citations and abstracts help researchers by leading them to different articles and by helping to decide if they should read the whole article or not.

GLOSSARY

Born digital: It refers to material which originates in digital form, rather than being produced in print and then digitized through scanning.

Digital Rights management (DRM): The term covers the description, identification, trading, protection, monitoring and tracking of all forms of rights usages relating to the digital material. DRM software is used with e- book in such a manner that it restricts actions like printing, downloading and reusing the content of e- books on different devices.

Full Text Databases: The Electronic databases which provide access to the full text of the articles published in journals are known as full text databases.

Metadata: It is the structured information which describes data item or a collection of data items. It is data about data.

Portable Document Format (PDF): It is a file format developed by Adobe systems in 1993. It preserves attributes of the source document no matter which application, platform and hardware type was originally used to create it.

Smart phones: These are mobile phone with advanced software which provide facilities for connecting to the Internet and browsing websites.

SUGGESTED ACTIVITIES

1. Visit the website of the 10 journals and capture the screenshot of their homepages.

2. Visit the site of Current Contents Connect and capture the screenshot of its homepage. Write the main subjects covered in it.
3. Visit the website of any full text database. Write the name of the database, its URL, content and coverage.
4. Visit the website of any bibliographic database .Write the name of the database, its URL, content and coverage.
5. Visit the website of any publisher of e-books. Write about its collection, and coverage of e- books.

**Notes**