

**Interdisciplinary Course (IDC) – 151****Library & Information Science (LIS)****UNIT 5: MANAGEMENT OF E-RESOURCES****5.1 E-Resources**

Electronic resources (or e-resources) refer to digital information and materials accessed and utilized through various devices, such as computers, smartphones, tablets, and e-readers. These resources include e-books, e-journals, online databases, multimedia materials, and other forms of digital content.

The increasing popularity of electronic resources can be attributed to their accessibility, cost-effectiveness, efficiency, and eco-friendliness. Electronic resources have revolutionized how information is accessed and shared, impacting various domains such as education, research, healthcare, and business.

Characteristics of E-Resources

The following are some key characteristics of e-resources which distinguish them from traditional print resources:

- 1) **Digital Nature:** E-resources exist in digital format, accessible through electronic devices such as computers, smartphones, or tablets. This digital nature allows for easy storage, transfer, and dissemination of information without the need for physical copies.
- 2) **Accessibility:** One of the primary features of e-resources is their accessibility. They can be accessed from anywhere with an internet connection, enabling users to retrieve information remotely without the constraints of physical location or operating hours, which is particularly beneficial for distance learning, remote research, and global collaboration.
- 3) **Searchability:** E-resources are typically equipped with search functionalities, allowing users to quickly find specific information within vast repositories. This feature enhances efficiency and saves time compared to manual searching through print materials.
- 4) **Interactivity:** Many e-resources offer interactive elements such as hyperlinks, multimedia content, simulations, and quizzes. These interactive features engage users more effectively, facilitating better understanding, retention, and application of knowledge.
- 5) **Updatability:** Unlike print resources, e-resources can be easily updated to reflect the latest information and developments. This dynamic nature ensures that users have access to current and relevant content, making them valuable tools for staying abreast of rapidly evolving fields such as science, technology, and current affairs.
- 6) **Versatility in Format:** E-resources come in various formats, including text-based materials such as e-books, articles, and research papers, as well as multimedia content like videos, podcasts, and animations. This versatility caters to diverse learning preferences and research needs, offering a rich and engaging learning experience.
- 7) **Customization:** E-resources often allow users to customize their experience by personalizing preferences such as font size, layout, and language. This customization enhances user satisfaction and accessibility, particularly for individuals with special needs or preferences.
- 8) **Remote Collaboration:** E-resources facilitate remote collaboration among researchers, educators, and learners by enabling the sharing and dissemination of resources across geographical boundaries.

Format of E-Resources

E-Resources encompass a wide array of formats, each catering to different learning styles, research needs, and preferences. Here are some common formats of E-Resources.

1. Text-Based Materials:

- **E-Books:** Electronic versions of printed books that can be read on digital devices like e-readers, tablets, or computers.
- **E-Journals:** Digital articles and academic journals covering various topics and disciplines. They may be accessed through online databases, academic platforms, or publisher websites.
- **Research Papers:** Scholarly papers and publications available in electronic format, typically found in academic databases, repositories, or institutional archives.

2. Multimedia Content:

- **Videos:** Educational videos, lectures, tutorials, and documentaries covering diverse subjects. They may be streamed online or downloaded for offline viewing.
- **Podcasts:** Audio recordings or broadcasts on specific topics, ranging from educational content to entertainment. Podcasts are often available for streaming or download through platforms like iTunes or Spotify.
- **Animations and Interactive Simulations:** Visual representations, animations, and simulations designed to illustrate complex concepts or processes. They enhance understanding and engagement through interactive elements.

Advantages of E-Resources

- Convenience:** You can access e-resources anytime, anywhere – no need to go to a physical library.
- Multi access:** E-resources have the facility to change the concept of single user to multi user access **at one time**. In simple words more than one user can access the same information simultaneously.
- Cost-effective:** It eliminates printing and postage cost. The access to electronic resources can be provided with 85-90% discount compared to print collections. This means access to more resources for less money.
- Interactive Learning:** Some e-resources offer interactive features, like quizzes or games, making learning more fun and effective.
- Search facilities:** An electronic resource is lot quicker to browse or search, to extract information from, and to integrate that information into other material and to cross-search or reference between different publications.
- Maintenance:** E-resources have not the problem of wearing and tearing, stolen, binding and shelving etc.
- Physical space saving:** E-resource require less space for storage and saves physical space.
- Environment-friendly:** Since e-resources are digital, there's no need for paper, which helps save trees and reduces waste.

Disadvantages of E-Resources

- Dependence on Technology:** You need internet access and devices like computers or smartphones to use E- Resources.

- i) **Quality Concerns:** Not all information online is accurate or reliable, so you need to be careful where you get your information from.
- ii) **Copyright Issues:** Some e-resources have restrictions on how you can use them, so you need to be aware of copyright laws.
- iii) **Distractions:** It's easy to get distracted by other things online when you're trying to study or research.
- iv) **Digital Divide:** Not everyone has equal access to technology or the internet, creating a gap between those who can access e-resources easily and those who can't.

Print Resources

Print resources refer to materials that are produced and distributed in physical form, typically on paper. These resources include books, magazines, newspapers, journals, pamphlets, posters, and other similar materials that are printed on physical mediums like paper or cardboard. Print resources offer several advantages, such as tangibility, portability, and ease of access for individuals who prefer reading from physical materials. However, they also have limitations, including the need for physical storage space, potential environmental impact from paper production, and difficulties in updating or revising content.

Differences between Printed Resources and Electronic Resources

The main differences between printed resources and e-resources are as follows:

- 1) **Format:** Printed resources are physical materials like printed books, printed newspapers, and printed journals, while electronic resources are available in digital format accessible through electronic devices like computers and mobile phones.
- 2) **Accessibility:** Electronic resources offer remote access from anywhere with an internet connection, providing instant availability to users. Printed resources require physical presence at a library or location where the material is stored.
- 3) **Searchability:** Electronic resources often have advanced search functionalities, allowing users to quickly navigate databases and find specific information. Printed resources rely on manual searching through indexes or physically browsing the material.
- 4) **Interactivity:** Electronic resources can include interactive features, multimedia elements, and hyperlinks for enhanced engagement. Printed resources lack these interactive elements but may offer a tactile reading experience.
- 5) **Preservation:** Printed resources provide a sense of permanence as physical copies that can be preserved across generations. Electronic resources rely on digital storage methods that may face risks of technological obsolescence or data loss.
- 6) **Dependency on Technology:** Electronic resources require technology such as devices and internet connectivity for access. Printed resources do not depend on technology and offer a screen-free reading experience.

i. (i) Introduction to Environmental Studies .

(ii) Natural Resources and Management .

(iii) Biodiversity and conservation .

(iv) Environmental pollution and climate

(v) Environmental pollution and climate

Significant challenges associated with the management of electronic resources and its effective solution

(8 Marks Questions)

A significant challenge in managing electronic resources is accessibility and preservation. As technology evolves, digital formats, platforms, and software used for e-resources may become outdated, making it difficult to access or retrieve older resources. Furthermore, electronic resources are vulnerable to data loss, corruption, or even software obsolescence. This challenge affects both institutions that manage large digital libraries and individual users.

One effective solution is to implement a digital preservation strategy. This involves several steps:

1. **Regular Backups:** Ensuring that e-resources are regularly backed up in multiple formats or locations helps prevent data loss. Cloud storage and physical backups (e.g., external hard drives) can provide reliable solutions.
2. **Format Migration:** As technology changes, digital files may no longer be accessible due to outdated formats. Institutions should monitor emerging standards and periodically convert resources to current, widely supported formats to maintain long-term access.
3. **Metadata Creation:** Adding detailed metadata (information about the resources) helps ensure that even if a format or platform becomes obsolete, the context and details about the resource remain clear. This also aids in locating and accessing the resource easily.
4. **Collaboration with Trusted Platforms:** Institutions should collaborate with platforms and services known for their long-term sustainability and commitment to preserving digital content, such as digital libraries and repositories, ensuring resources remain accessible in the future.

By adopting these strategies, the challenge of accessibility and preservation of electronic resources can be effectively managed, helping to maintain the value of these resources for future use.

Challenges faced by colleges in management of e-resources and its solution

(8 Marks Questions)

Colleges face several challenges in managing e-resources, including financial constraints, access issues, and lack of adequate infrastructure. One of the most significant challenges is the high cost of purchasing and maintaining e-resources. Many colleges struggle to allocate funds for subscriptions to academic journals, e-books, and databases. This leads to limited access for students and faculty.

Another challenge is managing licenses and usage rights. Since e-resources often come with complex licensing agreements, colleges find it difficult to track who has access, which can result in unauthorized use or violations of terms. Furthermore, multiple platforms and subscription systems can complicate the management of e-resources.

Additionally, colleges may lack the necessary infrastructure, such as high-speed internet or technical support, to fully utilize e-resources. Without proper IT support, students and faculty may face difficulties in accessing these resources, leading to underutilization.

A potential solution to these problems is for colleges to adopt a centralized digital management system. This system would streamline the process of tracking subscriptions, licenses, and access rights. By using this system, colleges can ensure compliance with licensing agreements, making the management of e-resources more efficient.

Moreover, colleges can explore open-access e-resources and collaborate with other institutions for shared subscriptions. This approach can help reduce the financial burden while still providing access to high-quality materials.

Conclusion Managing e-resources in colleges requires a strategic approach to overcome challenges like cost and access issues. By adopting centralized systems and collaborating with other institutions, colleges can improve access and management, ensuring that both students and faculty benefit from digital learning materials.

Open Access Resources

Open Access resources refer to electronic materials that are freely available on the internet without licensing or copyright restrictions. These resources can include articles, journals, books, conference proceedings, theses, videos, music, and more. These resources cover a wide range of subjects and disciplines, spanning from scientific research and academic publications to educational materials, cultural heritage, and creative works.

The benefits of open access are manifold. It accelerates the pace of scientific discovery by facilitating the rapid dissemination of research findings, promotes interdisciplinary collaboration, enhances the visibility and impact of scholarly work, and enables educators to access high-quality teaching materials for free.

Types of Open Access Resources

These resources include a wide range of content types, such as:

1. **Open Access Journals** Scholarly journals that make their articles freely available to the public, often funded through alternative business models such as article processing charges (APCs) paid by authors or institutional subsidies.
2. **Open Access Books** The concept of open access books refers to scholarly works that are made freely available online to users without any financial or technical barriers. These books are typically published under licenses that allow for free access, distribution, and reuse by readers.
3. **Open Educational Resources (OER)** Learning materials like textbooks, lecture notes, quizzes, and multimedia resources that are openly licensed and freely accessible for educational use, adaptation, and redistribution.
4. **Institutional Repositories** Digital repositories maintained by universities, research institutions, or organizations to showcase and preserve scholarly outputs such as research papers, theses, dissertations, and data sets.
5. **Public Domain Materials** Works whose intellectual property rights have expired or are waived by the copyright holder, allowing them to be freely accessed, reused, and redistributed without restriction.
6. **Creative Commons Licensed Content** Works that authors or creators license under various Creative Commons licenses, allowing users to access, share, and adapt the content under specific conditions outlined by the license terms.

Examples of Some Important Open Access Resources (Websites)

1. Open Access Journal

- DOAJ (Directory of Open Access Journals) - <https://doaj.org/>
- NIScPR Journals - <http://op.niscair.res.in/>
- Indian Academy of Sciences - <https://www.ias.ac.in/Journals/Overview/>

2. Open Access Books

- DOAB (Directory of Open Access Books) - <https://www.doabooks.org/>

LIS-ADC-151

FYUG 2nd Sem

- Project Gutenberg - <https://www.gutenberg.org/>
- Internet Archive - <https://archive.org/>
- 3. OpenCourseWare (OCW)
 - eGyanKosh IGNOU - <https://egyankosh.ac.in/>
- 4. Digital Library
 - National Digital Library of India (NDLI) - <https://ndli.iti.ernet.ac.in/>
- 5. Electronic Theses and Dissertations (ETD)
 - Shodhganga - <https://shodhganga.inflibnet.ac.in/>
 - Shodhgangotri - <https://shodhgangotri.inflibnet.ac.in/>

E-Journal Consortia

E-journal consortia refer to collaborative arrangements among libraries, institutions, or organizations to collectively subscribe to electronic journals or databases. These consortia are formed to leverage collective purchasing power, share resources, and provide access to a wider range of scholarly content for their members. By pooling financial resources and negotiating with publishers as a group, e-journal consortia can often secure better subscription deals and access to more comprehensive collections of electronic resources than individual institutions could afford on their own. Few examples of E-Journal Consortia are:

- e-ShodhSindhu Consortium
 1. UGC-INFONET Digital Library Consortium
 2. N-LIST (<https://nlist.inflibnet.ac.in/>)
 3. INDEST-AICTE Consortium.

Open Archives: Its role in enhancing the Accessibility and Dissemination of Academic Research

(8 Marks Question)

Open archives are digital repositories that store and provide access to scholarly research outputs, such as articles, theses, and datasets. These archives promote open access to research literature by making it freely available to the public, fostering knowledge dissemination and collaboration among researchers worldwide.

Role of Open Archives in enhancing the accessibility and dissemination of academic research:

Open archives play a crucial role in improving the accessibility and dissemination of academic research. They are digital repositories that make academic articles, research papers, and other scholarly works freely available to the public. Here are some ways open archives contribute to this:

1. **Free Access to Research:** Open archives allow anyone with internet access to read and download academic materials without needing a subscription or paying fees. This is particularly beneficial for researchers, students, and individuals in underfunded institutions or developing countries.
2. **Wider Audience Reach:** By being open and accessible online, research papers can reach a much broader audience, including non-academic readers. This helps researchers and institutions share their work with people beyond traditional academic circles.

3. **Increased Visibility and Citations:** Research available in open archives is more likely to be cited by other scholars. With broader access, researchers are more likely to find and reference each other's work, helping to advance knowledge in their fields.
4. **Faster Dissemination:** Open archives allow for quicker sharing of research findings, especially important for time-sensitive topics. Researchers can publish their work as soon as it's ready, without waiting for lengthy peer-review or publishing processes.
5. **Collaboration and Innovation:** Open archives make it easier for researchers to share data, methodologies, and findings. This promotes collaboration across disciplines, leading to new ideas, projects, and innovations.

Conclusion: Open archives enhance accessibility by making academic research freely available to a global audience. This increases the visibility of research, encourages collaboration, and speeds up the dissemination of new knowledge. As a result, they help to democratize access to information, benefiting scholars and the public alike.

IMPORTANT QUESTIONS

(Short Answer - 2 Marks)

Q1. What is e-book and e-journal ?

Ans:- An e-book is a digital version of a printed book that can be read on electronic devices like e-readers, tablets, or smartphones. An e-journal is a digital version of a printed journal or magazine, providing access to scholarly articles, research papers, or periodical publications via electronic devices and online platforms.

Q2. What are the advantages of E-Journals and E-Books?

✓✱ **Q3. What are the advantages of using e-books over print books in academic settings?**

Ans:- E-books are portable, accessible anytime, often cheaper, and allow quick searches. They save physical space and frequently include interactive features like hyperlinks and multimedia.

✓✱ **Q4. How does an e-journal differ from a traditional print journal?**

Ans:- An e-journal is digital and accessible online, while a print journal is a physical publication. E-journals offer quick updates, searchability, and easy distribution compared to traditional print journals.

Q5. What are the disadvantages of e-resources?

✓✱ **Q6. Write the characteristics of e-resources?**

Q7. What do you mean by open archives ?

Q8. How do OA Initiatives benefit students of academic libraries?

Ans:- OA (Open Access) initiatives benefit students of academic libraries by providing them with free access to a wide range of scholarly resources, including research articles, textbooks, and educational materials. This accessibility fosters learning, research, and innovation, empowering students to access high-quality information regardless of their financial constraints or institutional affiliation.

(Very Short Answer - 1 Marks)

1. Name two common formats for e-books.

Ans:- Two common e-book formats are PDF and EPUB.

2. Name a widely used format for academic e-journals.

Ans:- Widely used academic e-journal format: PDF.

3. What is the full form of PDF ?

Ans:- Portable Document Format.

4. Which device is commonly used for reading e-books?

Ans:- E-reader (e.g., Kindle) is commonly used for reading e-books.

5. Name of the LIS Journal published by NISCAIR / NIScPR?

Ans:- Annals of Library and information Science.

6. What is the name of Database offered by INFLIBNET for all Indian Colleges?

Ans:- N-LIST

7. What is the full form of N-LIST?

Ans:- National Library and Information Services Infrastructure for Scholarly Content

8. Mention one platform where e-journals can be accessed.

Ans:- JSTOR is one platform for accessing e-journals

9. What is the full form of OER?

Ans:- Open Educational Resources.

10. Name one open-access format for e-resources.

Ans:- Open Access format for e-resources is ePub.

11. What is the name of the channel offered by the Indian Government for e-learning?

Ans:- Swayamprabha.

12. Give one example of an OA Initiative in India?

Ans:- NDLI

(13) concept of ecosystem - food chain web

(14) Loading and ecosystem food chain web.

(15) food chain is a linear sequence that st natural flow from one organism to other