Resource Sharing And New Information Technology In Libraries

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Abstract- *Resource sharing has long been a fundamental principle in libraries and information centers, allowing institutions to enhance access to knowledge while reducing costs. With the rapid progress of new information technologies, resource sharing has moved beyond traditional interlibrary lending methods to dynamic, networked, and digital environments. This article investigates the concept of resource sharing, the role of developing information technologies in reshaping resource-sharing practices, and the difficulties and opportunities that these technologies provide. It investigates digital libraries, cloud computing, networking technologies, consortiums, and open-access platforms as important drivers of modern resource sharing. The study indicates that new information technologies improve efficiency, accessibility, and collaboration, making resource sharing more sustainable and user-centered in the digital age.*

Keywords: Digital Libraries, ICT, Information Technology, Library Consortia, Resource Sharing.

I. INTRODUCTION

Libraries have historically served as knowledge hubs offering access to books, manuscripts, and other media. Resource sharing—defined as the cooperative exchange of information resources among libraries—has expanded access beyond local collections. With the emergence of new information technology, resource sharing has entered a digital era that supports remote access, real-time collaboration, and expanded user services. In an era of information overload and financial limits, no single library or information center can independently acquire, store, and manage all published knowledge. Resource sharing arose as a strategic response to this dilemma, enabling institutions to collaborate and share materials, services, and knowledge. Traditionally, resource sharing was based on manual processes and physical items, which frequently resulted in delays and limited accessibility.

The introduction of new information technology (IT) has profoundly altered how resources are generated, saved, accessed, and distributed. The internets, digital databases, cloud computing, and integrated library systems have transformed resource-sharing paradigms, making them faster, more efficient, and more inclusive. This research investigates how new information technologies have influenced resource sharing and their implications for libraries and information centers.

II. HISTORICAL BACKGROUND OF RESOURCE SHARING

Early resource sharing initiatives included interlibrary loan (ILL) systems and union catalogs which enabled libraries to locate and request materials from partner institutions. Notable developments include:

- **OCLC (Online Computer Library Center)**: Founded in 1967, OCLC's WorldCat union catalog revolutionized how libraries share bibliographic information.
- **Interlibrary Loan Networks**: Regional and national networks facilitated systematic lending agreements among libraries (Mandel, 1983).

III. CONCEPT OF RESOURCE SHARING IN LIS

Resource sharing is a key term in Library and Information Science (LIS) that refers to the collaborative use of library resources such as books, journals, databases, digital materials, and services by many libraries or information centers. The basic goal of resource sharing is to make the best use of available resources, decrease material duplication, and improve users' access to information.

IV. MEANING OF RESOURCE SHARING

Resource sharing is a cooperative arrangement between libraries and information centers to exchange collections, services, and facilities in order to meet user information demands more effectively and affordably.

According to Krishan Kumar, resource sharing is a collaborative endeavor in which libraries make their resources available to users from other libraries through official or informal arrangements.

Similarly, S. R. Ranganathan stressed the principle in his library science regulations, particularly "Books are for use"

and "Every reader his/her book," which promote greater access to information resources.

V. NEED FOR RESOURCE SHARING

Several reasons have contributed to the need for resource sharing:

- **Information Explosion** - The rapid proliferation of publications and digital information.
- **Rising Costs of Information Resources -** Journals and databases are expensive to access.
- **Limited Library Budgets -** Many libraries are unable to purchase all necessary materials.
- **User Demand for Diverse Information -** Researchers demand access to a variety of resources.
- **The advancement of ICT -** Internet and networking technologies facilitate sharing.

VI. OBJECTIVES OF RESOURCE SHARING

The main objectives are:

- To give customers maximum access to information resources.
- To prevent the duplication of costly items.
- To improve library services for patrons.
- To encourage cooperation among libraries.
- To make the most use of the available resources.

VII. TYPES OF RESOURCE SHARING

Resource sharing can take a number of forms:

1. Interlibrary Loan (ILL)

Libraries employ mutual agreements to lend books or other resources to other libraries' users.

2. Document Delivery Service (DDS)

Users can request a copy of an article or document from another library.

3. Union Catalogues

A union catalogue is a combined catalogue of various libraries' assets that assists users in locating resources across libraries.

VIII. LIBRARY NETWORKS

Library networks use information technology to connect libraries and share resources more efficiently. Examples include:

- INFLIBNET Centre
- DELNET
- OCLC

IX. METHODS FOR RESOURCE SHARING

Some common ways are:

- Interlibrary Loan Services
- Digital repositories
- Shared cataloguing systems
- Institutional repositories.
- Library consortium subscriptions
- Cooperative collection development.

X. BENEFITS OF RESOURCE SHARING.

- Increases access to information resources.
- Reduces the cost of purchasing supplies
- Encourages library cooperation and networking.
- Enhances research and academic activity.
- Improves consumer happiness.

XI. CHALLENGES OF RESOURCE SHARING

Despite its advantages, resource sharing has certain drawbacks:

- Some libraries lack adequate infrastructure.
- Copyright restrictions
- Differences in Cataloguing Standards
- Limited funding.
- Technical and connection issues

XII. RESOURCE SHARING IN THE DIGITAL ENVIRONMENT.

Resource sharing has greatly increased with the growth of internet databases and digital libraries. Libraries can share through digital platforms:

- E-books
- E-journals
- Institutional repositories
- Research datasets

Networks like INFLIBNET Centre and DELNET play an important role in facilitating resource exchange across India's academic libraries.

XIII. NEW INFORMATION TECHNOLOGY: AN OVERVIEW

New information technology refers to current digital tools and systems that collect, process, store, retrieve, and disseminate data. In terms of resource sharing, these technologies include:

- Internet and networking technology.
- Digital libraries and institutional repositories.
- Integrated Library Management Systems (ILMS).
- Cloud Computing
- Metadata standards and protocols.
- Open-source platforms.

These technologies enable seamless communication between institutions and give individuals rapid access to shared resources regardless of their location.

XIV. THE IMPACT OF NEW INFORMATION TECHNOLOGY ON RESOURCE SHARING

1. Digital Libraries and Repositories.

Digital libraries enable institutions to digitize their holdings and make them available online. Multiple libraries can contribute to and profit from collaborative digital collections via shared digital platforms. This reduces physical handling of goods and allows for remote access. The advent of digital libraries, such as the Digital Public Library of America (DPLA), enables resource sharing at a scale previously unimaginable.

- Digital collections allow users remote access to materials.
- Institutional repositories provide archival access to scholarly output.

2. Library Consortium and Networks

Information technology has strengthened library consortiums by allowing for centralized resource administration, e-resource licensing, and collaborative decision-making. Consortia employ networked systems to negotiate subscriptions and give access to databases that would be too expensive for individual libraries.

3. Cloud Computing and APIs.

Cloud-based library systems enable resource sharing by hosting catalogs, databases, and digital repositories on shared servers. This technique lowers infrastructure costs, increases scalability, and allows for real-time data sharing between institutions. Cloud-based library services support scalability and interoperability. APIs (Application Programming Interfaces) allow libraries to integrate external services, enhancing discovery and delivery.

4. Integrative Library Management Systems (ILMS)

Modern ILMSs simplify resource allocation with shared catalogs, automated interlibrary loan modules, and uniform metadata circulation, acquisition, and user services. These technologies improve the efficiency and accuracy with which materials can be searched and requested. Systems such as Koha, Ex Libris Alma, and CirceDynamics facilitate seamless resource management and sharing.

5. Open Access and Institutional Repository

Open-access platforms and repositories allow for the free sharing of intellectual outputs such as research papers, theses, and datasets. New information technologies enable the global transmission and collaborative use of academic resources.

6. Web-based Interlibrary Loan Platforms

Platforms such as **Rapido** and **ILLiad** automate and track ILL requests, reducing turnaround time and administrative burden.

7. Mobile and Remote Access Tools

Mobile apps and responsive catalogs expand user access to resources anytime, anywhere.

XV. BENEFITS OF TECHNOLOGY-BASED RESOURCE SHARING

There are several benefits of integrating new information technology into resource sharing.

- **Improved Access:** Users can access resources anytime, anyplace.
- **Cost Efficiency:** Shared licensing and infrastructure reduce expenses
- **Speed and Convenience:** Automated systems provide faster delivery
- **Improved Collaboration:** Institutions can work more efficiently together.
- **User-Centered Services:** Provide personalized and on-demand access to information.

XVI. CHALLENGES AND LIMITATIONS OF RESOURCE SHARING WITH NEW TECHNOLOGY

Despite its advantages, technology-driven resource sharing confronts a few challenges and Limitations:

- Technological inequality: Not all institutions have equal access to advanced IT infrastructure.
- Copyright and Licensing Issues: Sharing digital resources may be limited by legal restrictions.
- Data Security and Privacy: Shared systems are subject to cyber assaults.
- Uniform standards can impact interoperability.
- Training and skill gaps: Staff need ongoing training to manage new technologies.
- Addressing these difficulties requires policy support, technical standards, and ongoing professional growth.
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XVII. CASE STUDIES

1. **WorldCat and Global Cataloging:** WorldCat's extensive bibliographic database enables libraries worldwide to locate resources efficiently (OCLC, 2020).
2. **The DPLA Initiative:** The Digital Public Library of America aggregates metadata from US cultural institutions, demonstrating how shared digital platforms enhance access.

XVIII. FUTURE TRENDS IN RESOURCE SHARING

Future directions in resource sharing include:

- Artificial Intelligence (AI) for semantic search and automated resource suggestion.
- Blockchain for secure rights management.
- Greater adoption of linked data to improve discoverability.
- Collaborative digital preservation networks.

Emerging technologies are likely to further transform resource-sharing practices. AI, big data analytics, blockchain, and semantic web technologies have the potential to improve shared resource discovery, authentication, and personalization. A stronger emphasis on open science and worldwide collaboration will broaden the breadth of resource sharing beyond institutional boundaries.

XIX. CONCLUSION

Resource sharing is still an important technique for libraries and information centers to fulfill the growing expectations of users. New information technology has altered resource sharing from a sluggish, manual procedure to a quick, digital, and collaborative method. Institutions can give more equal access to information by utilizing digital libraries, cloud computing, consortiums, and open-access platforms. While obstacles in technology, copyright, and skills remain, strategic planning and collaboration can assure long-term and effective resource sharing in the digital age.

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