

Chapter 3

Contemporary Trends and Technologies in Research Libraries: An Overview

Neha Lata

 <https://orcid.org/0000-0001-5808-9923>

Babasaheb Bhimrao Ambedkar University, India

Valentine Joseph Owan

 <https://orcid.org/0000-0001-5715-3428>

University of Calabar, Nigeria & Ultimate Research Network (URN), Nigeria

ABSTRACT

This chapter discusses some of the contemporary trends and emerging technologies in research libraries. The chapter begins by explaining the concept of a research library and differentiating between the services offered in traditional versus digital research libraries. The contemporary trends and technologies discussed in this study include big data, blockchain technology, podcast, vodcast, data everywhere, drones, robotics and artificial intelligence (AI) technology, unplugged, makerspace, and the internet of things (IoT). The chapter is important to library users, librarians, and the general public interested in library practices.

INTRODUCTION

A research library is owned by institutions seeking to promote access to scholarly materials and support research. A typical research library contains extensive print and non-printed materials on a broad spectrum of subjects. Therefore, primary and secondary literature can be accessed from a research library. We can refer to libraries in universities and research institutions as research libraries since they contain specialised branches attending to different disciplines. There are two types of research libraries – refer-

DOI: 10.4018/978-1-6684-3364-5.ch003

Contemporary Trends and Technologies in Research Libraries

ence and lending libraries. In practice, reference research libraries do not allow external users to borrow/lend from their collections, whereas lending research libraries render lending services to interested users. Research libraries are designed to satisfy the demands of researchers and are, therefore, filled with authentic and high-quality materials. Traditionally, the worth of a research library is determined by its size. Collection size, budget, expenditures, and staff are other input measures representing the library's effort and potential to meet users' demands (Nitecki & Franklin, 1999). These input metrics do not account for how users' requirements and expectations are successfully met.

The impact of research libraries is quantified somehow, especially in terms of users' interaction with materials and services. Users' expectations are set before the interaction, and their impression of the library services provided is assessed. Part of the impact is quantified by querying the gap between expected standards and users' perceptions. Therefore, the user is a critical evaluator of the library's influence. Through digitisation programmes and agreements for licences that allow subscription collections, research libraries can make computational use of collections easier. As the knowledge of the public regarding data visualisation and analytics develops, so does the number of new users (including librarians) who wish to experiment with computational tools. Many of these users are only at the beginning of their learning curve. Internally, research libraries have many opportunities to apply data-centric techniques like machine learning to augment descriptive information and produce text corpora (Calvert, 2020). This chapter discusses the library services offered in the digital age and the contemporary trends and technologies in research libraries. Following completion of this chapter, the reader should be able to:

- Understand and explain the meaning of a research library.
- Differentiate between library services offered traditionally and digitally.
- Identify and comprehend trends and technologies used in research libraries.

LIBRARY SERVICES IN THE DIGITAL AGE

We live in the digital age, and in many situations, the central role of information in this era is digital (Mayega, 2008). There is increased Internet usage for information spread and retrieval in today's world, which has affected the way knowledge is gathered and used (Owan et al., 2021; Owan & Asuquo, 2021). The shift toward electronic research libraries has dramatically altered the public's views towards considering conventional libraries. The digital network is the principal mechanism for sharing information. Information across different file formats (such as audio, text, video and audio-visuals) is now easily created, managed, stored and accessed in ways that were only imaginable some decades back. Emerging technologies enable library professionals to identify, gather, organise, customise, and distribute information products and services to the user community in various forms and kinds, both on-demand and in advance, in physical and virtual locations, in real-time (Ayo-Olafare, 2020). Consequently, many libraries are spending to buy digital library materials to satisfy modern-day expectations.

There are several ways in which a research library can utilise the Internet, ranging from setting up a library website to allowing consumers to browse existing catalogues electronically. Scholarly materials such as published research papers may be found using specialised search engines. People may do research on the Internet using the computers and Internet connectivity available in public libraries (Mostapha, 2005). Users under the age of 30 are especially drawn to the convenience and accessibility of online library resources (Corradini, 2006; Snowball, 2008). Most libraries are significant partners for google

15 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/contemporary-trends-and-technologies-in-research-libraries/306427

Related Content

Role-Based Multi-Agent Systems

Haibin Zhu and MengChu Zhou (2008). *Personalized Information Retrieval and Access: Concepts, Methods and Practices* (pp. 254-285).

www.irma-international.org/chapter/role-based-multi-agent-systems/28077

Contemporary Trends and Technologies in Research Libraries: An Overview

Neha Lata and Valentine Joseph Owan (2022). *Innovative Technologies for Enhancing Knowledge Access in Academic Libraries* (pp. 40-56).

www.irma-international.org/chapter/contemporary-trends-and-technologies-in-research-libraries/306427

Text Clustering using Distances Combination by Social Bees: Towards 3D Visualisation Aspect

Hadj Ahmed Bouarara, Reda Mohamed Hamou and Abdelmalek Amine (2014). *International Journal of Information Retrieval Research* (pp. 34-53).

www.irma-international.org/article/text-clustering-using-distances-combination-by-social-bees/127000

Evolutionary Optimization for Prioritized Materialized View Selection: An Exploratory Analysis

Heena Madaan and Anjana Gosain (2022). *International Journal of Information Retrieval Research* (pp. 1-18).

www.irma-international.org/article/evolutionary-optimization-for-prioritized-materialized-view-selection/300295

Sarcasm Analysis and Mood Retention Using NLP Techniques

Srijita Majumdar, Debabrata Datta, Arpan Deyasi, Soumen Mukherjee, Arup Kumar Bhattacharjee and Anal Acharya (2022). *International Journal of Information Retrieval Research* (pp. 1-23).

www.irma-international.org/article/sarcasm-analysis-and-mood-retention-using-nlp-techniques/289952