Chapter 3
Mastering Digital Libraries in the Digital Age

Kijpokin Kasemsap
Suan Sunandha Rajabhat University, Thailand

ABSTRACT

This chapter gives an overview of digital library topics: digital libraries and information architecture; digital libraries and electronic learning (e-learning); digital libraries and the Semantic Web; digital library evaluation; digital libraries and service quality; and the significance of digital libraries in the digital age. The Internet and the World Wide Web provide the impetus and technological environment for the development and operation of digital libraries in the digital age. Digital libraries comprise digital collections, services, and infrastructure to educationally support the lifelong learning, research, and conservation of the recorded knowledge. Whereas traditional libraries are limited by storage space, digital libraries have the potential to effectively store much more information and documents, because digital information requires very little physical space to contain them. Encouraging digital libraries has the potential to improve academic library performance and gain educational goals in the digital age.

INTRODUCTION

The next generation of intelligent information systems will emerge from the recent digital library research (Leidig & Fox, 2014). Digital libraries collect the digital information resources and make them available to the public or a specific community (Hu, Hu, & Yan, 2014). The goal of digital libraries is to preserve information in the long term by means of specific mechanisms that facilitate the retrieval, browsing, and access (Lovasz, Lovasz, & Gruescu, 2014). Digital libraries collect the materials coming from different kinds of organizations including departments, libraries, and archives (Catarci, Di Iorio, & Schaerf, 2014). Digital libraries offer a massive set of digital services to the geographically distributed library patrons (Ahmad & Abawajy, 2014). Digital library users can access the digital library services from anywhere at any time towards saving their time (Kaur & Singh, 2012).

The widespread adoption of the Internet has resulted in digital libraries that are increasingly applied by the diverse communities of users for various purposes and in which sharing and collaboration have become the important social elements (Smeaton & Callan, 2005). With the advent of the Web 2.0 and the modern information technology (IT), the traditional concept of library has advanced a profound change from a collection of physical information resources to a collection of digital resources (Meghini, Spyratos, Sugibuchi, & Yang, 2014). Collections of information resources are the major directions in the development of digital libraries (Kogalovsky, 2000). The sustainable business models to facilitate the digital libraries should support the access supported by specific design and usability guidelines that facilitate the easier, better, and cheaper access (Chowdhury, 2014).

The convergence of next-generation networks and the emergence of new media systems have made media-rich digital libraries popular in application and research (San-xing, Rody, & Jian-bo, 2005). The main objective of digital library research is to develop the methods which enable the efficient data manipulation for library services (Kodali, Farkas, & Wijesekera, 2004). Digital libraries are utilized in a wide variety of ways towards supporting a multitude of requirements across various domains (Adams & Blandford, 2004).

This chapter aims to bridge the gap in the literature on the thorough literature consolidation of digital libraries in the digital age. The extant literatures of digital libraries provide a contribution to practitioners and researchers by describing the multifaceted applications of digital libraries to appeal to the different segments of digital libraries in order to maximize the academic library impact of digital libraries in the digital age.

BACKGROUND

There has been little empirical research investigating the specific types of help-seeking situations that arise when people interact with information in new searching environments, such as digital libraries (Xie & Cool, 2009). Libraries effectively organize an essential part of academic institutions, enabling and facilitating the exchange and growth of information, knowledge, and culture among teachers, students, and the general public (Herrera-Viedma & Lopez-Gijon, 2013). Libraries have traditionally functioned as the repositories where the information content of a society is analyzed, organized, and stored, acting as a permanent record (Lanagan & Smeaton, 2012). Libraries are the central parts in the university and play significant roles in achieving the objectives of higher education (Haider, 2004).

Digital libraries increasingly benefit from research on the automated text categorization for improved access (Darányi, Wittek, & Dobreva, 2012). Digital library can be regarded as a system, which manages a collection of digital information resources (Lovasz et al., 2014). Digital library is the text database running the conventional search engine, and providing individual documents in response to the full-text queries (Lu & Callan, 2006). Digital libraries contain a wealth of information for the digital library users to access (Osborn & Hinze, 2014). Digital libraries involve various types of data, such as text, audio, images, and video (Bhargava & Annamalai, 2000). Barbuti et al. (2014) stated that contemporary libraries have quickly changed their social role and function due to the proliferation and diversification of multimedia digital documents.

Digital libraries represent several perspectives, such as data management, information retrieval, information systems, image processing, artificial intelligence, human-computer interaction, and library sciences (Ioannidis, 2005). Digital libraries can manage several types of documents (Castelli, Pagano, &

29 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/mastering-digital-libraries-in-the-digital-
age/191504

Related Content

A Study on Evolutionary Technique to Predict the Sales During COVID-19
Manu PriyaDarshani, Mohan Prasad Sinhaand Keshav Sinha (2021). *Handbook of Research on Library Response to the COVID-19 Pandemic (pp. 376-402).*
www.irma-international.org/chapter/a-study-on-evolutionary-technique-to-predict-the-sales-during-covid-19/272323

Collaborating Off Campus: Creating Communities of Practice with New Partners
Adam T. Brisk, Kim Pittmanand Matt Rosendahl (2016). *Technology-Centered Academic Library Partnerships and Collaborations (pp. 245-274).*
www.irma-international.org/chapter/collaborating-off-campus/155416

Tongwei County Library: Practices of Social Cooperation in Grassroots Libraries in Western China
Weiping Wangand Zhipeng Wei (2021). *International Journal of Library and Information Services (pp. 48-60).*
www.irma-international.org/article/tongwei-county-library/265290

Challenges to Libraries During a Health Crisis and a Way Forward to Deal With These Challenges
Muneeba Saleem, Waseem Ul Hameed, Bushra Anwer, Shafqat Ali Niaz, Sitara Bibiand Shazma Razzaq (2021). *Handbook of Research on Library Response to the COVID-19 Pandemic (pp. 248-265).*
www.irma-international.org/chapter/challenges-to-libraries-during-a-health-crisis-and-a-way-forward-to-deal-with-these-challenges/272316

Doctor's Awareness and Perception of Medical Library Resources and Services: A Case Study of Delta State University Teaching Hospital (Delsuth), Nigeria
Violet E. Ikolo (2020). *International Journal of Library and Information Services (pp. 58-71).*
www.irma-international.org/article/doctors-awareness-and-perception-of-medical-library-resources-and-services/253104