Chapter 73
Disaster Management in Digital Libraries: Issues and Strategies in Developing Countries

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ABSTRACT

The role of digital libraries in information generation,organization, dissemination and storage cannot be overemphasized. This article articulates the importance of digital libraries and the need to preserve them from disasters. It highlights the causes and effects of disasters in digital libraries. Prevention and management of disasters were also discussed. Issues and challenges around information and communication technology (ICT), that has direct bearings on digital libraries and disaster management in developing countries were raised. In addition, recommendations were made on how to improve on disaster prevention and control.

INTRODUCTION

Since the turn of the 21st century, libraries have been drifting from the utilization of manual methods of operations to automated methods. The resources made available in the libraries are also being repackaged in virtual or electronic format. It is this drift that has brought about the concept of digital libraries (Ottong and Ottong, 2013,p.99).

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Digital libraries carry out specialized library services and functions to users through automated methods or machine readable formats. Nwalo (2011, p.32) described digital libraries as any of the following:

- Collection of electronic journals and books
- Repository of multimedia files
- Digital archives of information created from local knowledge
- Electronic version of libraries.

Despite the advantages derived in the use of automated methods in carrying out library and information services, the occurrence of disasters in these digital libraries can not be ruled out and have become matters of great concern globally. This is because disasters are often inevitable. Ottong and Ottong (2013) defined a "disaster as any incident which threatens human safety and /or damages, or threaten to damage, a library's buildings, collections (or items therein), equipment and systems" (p.100). Disasters could be linked to physical, environmental and technological factors such as explosion, loss of power, internet failure, flood, etc.

The advent of digital libraries has increased the occurrence of disasters caused by technical and technological factors. These could include hampering of library operations and loss of vital data caused by such technical factors as hacking into library online records, virus damage to records, systems crash and breach in computer security systems, etc. A critical examination of the concept of disasters in digital libraries, with a view to reducing their occurence to the barest minimum, would require an indepth analysis of current management, control practices, and needed improvements.

This article outlines the causes and effects of disasters in digital libraries and makes recommendations for developing countries.

CAUSES OF DISASTERS IN DIGITAL LIBRARIES

Disaster in digital libraries implies any incident that may cause threat or damage to digital documents in the holdings of a library. Disaster management activities for digital information resources arise from real and imagined threats (Anderson, 2005 and Cervone, 2006). The causes of disasters in digital libraries can be accrued to various factors. According to Altman et al. (2009, p.171), these can be broadly categorized into four groups:

- Physical threats
- Technological threats
- Human threats
- Institutional threats

Physical Threats

These are causes of disasters in digital libraries that come about as a result of some natural effects which could be controllable and in some instances uncontrollable; age, storage facilities, fire and some natural disasters.