

## Chapter 13

# Smart Libraries in the Google Glass Era for Millennial Users

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### ABSTRACT

*The motivation behind this chapter is to talk about the rising and imaginative advancements which coordinate to shape savvy libraries. Smart libraries are the new age libraries, which work with the amalgamation of shrewd advances, brilliant clients, and savvy administrations. The literature search compared different watchwords like smart libraries, internet of things (IoT), data mining, artificial intelligence (AI), etc. Now the time has come that libraries need to adopt the “smart library” culture due to changing demands of the patrons and the different services offered by the libraries to the patrons. The chapter features the developing new cool latest technologies that are used in different brilliant libraries and how they impact the productivity of libraries as far as patrons, administrations, and innovative coordination. The chapter attempts to feature the present advancements in the shrewd library set-ups for the productive working of library set-ups.*

### 1. INTRODUCTION

Present age libraries are not just about loaning books. They have their own creative spaces for library users and that is why libraries are also referred to as learning centers. To improve the innovative proficiency of nearby networks, libraries should be furnished with significant advanced tools. Libraries have been constantly advancing to give computerized assortments and administrations. With the help of Internet of Things (IOT) innovations, a few libraries have developed sophisticated approaches to address the difficulties in fulfilling information needs of the users. Utilizing new technologies to improve their services towards users, such libraries have been named “Smart libraries”. A Smart library ought to be

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client-driven and versatile to client needs. To accomplish that, sagacity implies that the library ought to be able to do naturally fulfill the requirements of its clients and deliver quality techno-centric services.

Smart library innovations have helped them grow as centers of targeted learning. Digital literacy and new ways of innovative development have democratized them from traditional physical spaces to innovative centers. Libraries have been reconceptualized as “redistributive infrastructure” with the help of smart technologies. Libraries are constantly evolving with user needs, shifting technological environments and extensive data growth which in turn creates smart libraries while creating smart users and smart services to keep up with the camouflaging, complexity of access and dissemination of knowledge (Gul and Bano, 2019). The authors also noted that this cannot be done without an electronic information portal to provide users with 24/7 access of information, library collections, qualitative internet tools, library catalogs, collection databases, e-distribution, electronic and e-services. Without highly trained staff it is also difficult to build the smart library (Si, Xing, Zhuang, Hua, and Zhou, 2015).

Smart libraries focus on the use of technology in the library and are designed to provide a highly engaging learning space in which participants are encouraged to contribute ideas and thoughts. These libraries optimize traditional and non-traditional library facilities and the user’s library experience, as well as enhance student learning opportunities (Burgess, 2010). Such libraries store user learning history data gathered by the learning support device. By looking at data of each user, the device produces profile data for the user, including his / her desires, learning intervals for various issues, privacy data, among other types of data. Once the user starts learning the topic, the device scans the database for users with similar profiles. Using the learning history of similar users, the program may find the average time needed for the user to complete the subject, the content in smart libraries that might be useful for the user, the kind of library support that might be helpful, and so on (Kim and Abbas, 2010).

Smart libraries contain eight subsystems: a domain model; a student model; a tutor and test model; a voice stress analyzer subsystem; a multivariate optimal module design and multiple criteria analysis subsystem; a machine learning system database; a decision support subsystem; and a graphic interface. New libraries would emphasis on innovation for both traditional and non-traditional library services to reach all library users via mobile devices (Pan,2010). Intelligent Library Systems encourage library users to retrieve information based on what they mean rather than what they say. Intelligent library systems do not respond to user queries solely by matching words; rather, they use ontologies to explain the query and provide possible responses based on what users say. Intelligent library systems enable libraries to become more interactive, accurate and user-friendly (Dent, 2007). A digital library shall strive to become a smart library that delivers advanced services, such as tailored services, hypertext services, computer-aided design services, data mining services, and cross-media services (Kaklauskas, A. et al., 2007).

This Chapter is designed to achieve following Objectives:

- Study of Advanced Technologies that are used for developing Smart Libraries;
- Study of Recent Trends in Library Environment;
- Exploration of Users Expectations from Millennial Libraries.

## **2. SMART LIBRARY**

The term ‘smart library’ is associated with the idea of an intelligent library backed with digital library and virtual library. A Smart Library comprises of complex hardware and software with a variety of op-

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