

GREEN LIBRARY: CONCEPT, FEATURES AND ELEMENTS

Dr. Prafulladatta P. Kulkarni

I/c Principal, R. P. Gogate College of Arts & Science, and
R. V. Jogalekar College of Commerce, Ratnagiri – 415 612 (MS), India.
(Affiliated to University of Mumbai)

Abstract

The concept of 'Green library' is of recent origin and is under the process of evolution. Being an evolving concept it is gaining popularity among the researchers, academicians, and library professionals all over the world. The amount of information available on 'Green Library' and 'Sustainability' is limited but continues to grow. Interconnected topics of green libraries and sustainability have received a great deal of coverage in recent years in various publications targeted toward world librarians. This article elaborates the concept of green library, lists out features, and necessarily discusses the elements of green library.

Keywords: *Green library, Sustainability, Features of green library, Elements of green library.*

Introduction: With the advancement of science and technology our life styles are influencing and changing with a greater pace. Today, the demand for anything is increasing rapidly, and we people are harnessing the power of it to fulfil our unending demands. In this scenario we people are forgetting something important, which should be recognized before we people talk about sustainable development in this faster changing world. It is nothing but the word 'Green', which is of a great significance for a healthy survives. We have observed that, over the past few years there are increasing interests towards green revolution in almost every sector and library is one of them.

Today, libraries work as gateways for knowledge are particularly responsible not only for disseminating the idea of sustainability but also for leading by example and thus serving as exemplars. Libraries of today should incorporate green elements into their operations. In fact, there are several reasons why libraries should incorporate green features into their buildings. It is vital for the health of library users and the mother earth on which we people live.

Literature Review: The amount of information available on green libraries and green library practices is limited but continues to grow. For this study the author has referred some literature related to 'Green library' or 'Sustainable Library' and 'Green Library Movements.' Some relevant and important literature which has been found and reviewed by the author is as follows.

(LeRue, James & Suzanne LeRue, 1991) in their article have explained in detail how to be environmentally supportive at home and in the library. (Smith, Steven, 1991) discussed the spatial limits of the library and nature, and the role libraries need to play in preserving both. (Brown, Bill, 2003) discussed the emerging trend of green libraries and proclaimed that libraries were on the cutting edge of green design. (Lamis, A. P., 2003) took an overview of sustainable design and planning of model building. (Antonelli, Monika, 2008) explained about different web page and websites related to green library building. (Neale, J. C., 2008) described how libraries can be more eco-friendly. (Tseng, S., 2008) highlighted green library design and its evolution. (U.S. Green Building Council (USGBC), 2008) has provided for the rating system as Leadership in Energy and Environmental Design (LEED) certification. (B. Vijayalakshmi, 2010) has given information about the green Library or sustainable libraries initiative in India and rest of the world. (Aulisio, G. J., 2013) provided for guidelines and insight into library buildings. (Hauke, P. and Werner, K. U., 2013) described the details about the green library movement and early begin of the movement in 1990s. (Purohit, S., 2013) discussed in detail the green library as the new concept of library. (Hacettepe, S. K. & Boustany, J., 2014) explained the journey from green libraries to green information literacy. (Shah, Leena et. al. 2015) emphasised on to the need for green libraries.in academic institutions. (Meher, P. & Parabhoi, L., 2017) took an overview of the concept of green library with special reference to Indian libraries. (Nikam, S. S., 2017) wrote an article dealing with the concept of green library. (Sawant, U. S. & Sawant, R. G. 2018) offered a discussion on the concept, features and role of green librarian. (American Library Association (ALA), 2019) has focused onto

the concept of green library through emphasising on the relationship between sustainability and libraries. According to Online Dictionary of Library and Information Science (ODLIS) green library is a library designed to minimize negative impact on the natural environment and maximize indoor environmental quality by following certain means.

Concept of Green Library: There is no univocal definition of the term 'Green Library'. When we say 'Green Library' we necessarily mean by it overall library operations and library building. The concept therefore seems to be much comprehensive. In simple words, 'Green Library' is nothing but environment friendly or eco-library. 'Green' or 'Sustainable Libraries' are the structure that is designed, built, renovated, operated, or reused in an ecological and resource efficient manner. The Online Dictionary of Library and Information Science (ODLIS) defines Green Library or Sustainable Library as, "A library designed to minimize negative impact on the natural environment and maximize indoor environmental quality by means of careful site selection; use of natural construction materials and biodegradable products; conservation of resources like water, energy, paper, and use of responsible waste disposal recycling system; etc." According to New World Encyclopaedia 'Green Library', also known as a 'Sustainable Library' is, "A library built with environmental concerns in mind."

Here, the term 'Sustainability' is defined in Online Dictionary of Library and Information Science (ODLIS) as, "The capacity to meet the needs of the present without compromising the ability of future generations to meet their own needs." It has economic, social, and environmental aspects. And sustainable library is one which performs its functions and plays its role in an environment friendly manner. In new construction and library renovation, sustainability is increasingly achieved through Leadership in Energy and Environmental Design (LEED) certification, a rating system developed and administered by the U.S. Green Building Council (USGBC).

Basically, green libraries are a part of the larger green building movement. Also known as 'Sustainable Libraries', 'Green Libraries' are being built all over the world, with many high profile projects bringing the concept into the mainstream. Many people view the library as having a unique role in the green building movement due to its altruistic mission, public and pedagogical nature, and the fact that new libraries are usually high profile, community driven projects.

To sum up, it can be said that green library can be characterized as 'Environment Friendly Library' or 'Sustainable Library'.

Features of Green Library: Basically, green library is characterized as environment friendly library or sustainable library. And every green library necessarily possess certain essential features like -

- Proper location or most suitable site
- Use of natural, recycled and regionally available materials
- Use of reflective roof and ground
- Use of insulating windows
- Conservation of resources like water, energy, and paper
- Use of energy-efficient lighting minimizing consumption
- System for optimized cooling
- Suitable plantation both inside and outside of building
- Circulation of fresh and healthy air
- Use of environment friendly technology

Elements of Green Library: Basically, the 'Green Library Movement' has been emerged in the early 1990s and is gradually gaining popularity in the field of library and information science profession. Many of the library professionals of today are working on the idea of green library, which will use natural and regional construction material, minimize consumption of water and electricity, and also use environment friendly technology. Though it is somewhat in the initial stages of development, we need to understand that green or sustainable library is the structure that is designed, built, renovated, operated, or reused in an ecological and resource efficient manner. There are wide range of ways to promote the idea of green library, such as use of environmentally friendly or recycled and regionally available materials, optimal use and conservation of natural resources, virtual user services and resource-saving copy services, waste separation, elimination of plastic bags, no more paper cups and instead use of recycled/private crockery, fair-trade coffee in the library's coffee shop, green events, choosing library suppliers with green certificates and many more.

While the term 'Green Library' is often used specifically to describe a library building that has built by using standards or guidelines like LLED, it can also be refer to a library, which is becoming more environmentally sustainable in a significant ways, whether by using nontoxic cleaning supplies, reducing energy consumption, or collecting and promoting materials with environmental themes. Basically, green design is an integrated process. No one aspect of a building's architecture makes it a green architecture. Without proper integration right from the early stages of the planning phase, redundancies can occur, and can eliminate many of the potential benefits of sustainable design. Good sustainable design always capitalizes on the synergistic relationships that occur between the various design elements. LEED groups these elements into five categories. Buildings can be designed in a way in which, one category helps another category fulfil its goal of good and sustainable design. These five elements can be discussed as under.

- **Site selection:** Library is the heart of any college or institution or university or any department. It should be at an appropriate site or locality so as to make users concentrate on their reading or study. Accessibility or connectivity through public transportation system is a necessary element, which should need extra attention while searching for site. In this regard various guidelines are given by different agencies and organizations like LEED, USGBC, and Indian Green Building Council (IGBS) to developed green library, which need to be considered.
- **Water conservation:** It is one of the essential resources required everywhere in houses as well in offices. It is scares and valuable, hence, need to use very carefully. A library should undertake proper water management, which help to keep library clean, hygienic and green. There are many different ways for libraries to conserve and make optimum utilisation of water like rainwater harvesting system, use of low flow fixtures, and waterless urinals. Moreover, library can reuse of waste water and rainwater for plantation and gardening, and for flushing in toilets.
- **Energy conservation:** Though the use of energy is unavoidable, its consumption should be reduced. In a library it can be save in many different ways. A library can have sufficient number of windows, glass windows, use of natural light, use of energy efficient bulbs and lights, etc. Even required electricity can be generated using direct sunlight by planting solar system on the roof top of library building. Also the surplus energy can be conserved and used when there is a need of extra energy.
- **Construction/Building materials:** While thinking about a green library the first thing which comes in to our mind is the library building. There are many standards and protocols available in India and outside to make a green building by using recyclable and environment sustained materials. Indian Green Building Council (IGBC) is a part of Confederation of Indian Industry (CII), which offers a variety of services like green building rating programs, training programs, certification service program, etc. LEED is an internationally accepted program planning environmentally compatible high performances green building for a healthy environment. It is necessary to select materials for the library, which lead to minimum waste as possible and causing less damage to the natural environment.
- **Indoor air quality:** Today, fresh, healthy, and breathable air is a most important factor. Particularly, inside the library building there is the need of a quality air. For this proper plantation is needed in the surrounding campus, which provides clean and pure air and also make library a cool place. Basically, trees give pleasant air and controls air conditioner operation during summer season. In hilly area building should be in a sunny place so that it will become little warmer and reduces room heater and blower expenses during winter season. Further, proper arrangement s should be made for air circulation and ventilation. It is to be suggested that a green building need to be designed in a way in which, the air gets recycled and does not stay stagnant.

Concluding Remarks: To conclude, it is to be said that a 'Green Library' or 'Sustainable Library' is a modern library i.e. a place, which uses environment friendly building materials, which make optimum use of natural resources, which minimizes wastages, which make better use of renewable sources and which carries its operations in more cost effective and efficient manner.

Now days it is much more needed for a library to greening the library environment. In this context library professionals of today should make some concrete decisions and take essential steps to make their libraries green and should also take part in green library movement. Many national and international bodies are extending their help making libraries a green place. However, along with these bodies, library users, librarians and government should take initiatives and actively participate in green library movement making it successful. It is to be noted that today's libraries as gateways for knowledge are particularly responsible not only for disseminating the idea of

sustainability but also for leading by example. Always remember that small steps in going green can produce big results over a period of time.

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