

EVALUATION OF INITIATIVES OF GREEN LIBRARIES IN INDIA: A STUDY OF CHALLENGES AND STRATEGIES

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ABSTRACT

A library that was designed with the environment in mind is known as green library. Green or Sustainable Libraries are the structure that is designed, built, renovated, operated or reused in an ecological and resource efficient manner. Early in the 1990s, India saw the origin of the idea of a green library. Being an evolving concept, it is gaining popularity among the researchers, academicians, and library professionals all over the world. This paper makes an effort to define the green library idea, its features and initiatives in India. It also gives an outline of green library and the role of modern librarian to make libraries green. Environmental challenges like energy depletion and climate change impact the kind of information that libraries provide to their stakeholders. The trend of green libraries in India is not only growing in number but also should extend across the country. The paper finds that librarians have to be keen on updating themselves on sustainability trends in the field of digital libraries and should provide awareness and create the space in the libraries to exemplify the Green practices.

Keywords: Green Libraries, Green Library Movement, Eco-degradation, Library Initiative, Green buildings, University Libraries, Academic Institutions.

Introduction

The green library is an innovative concept and gaining popularity in enhancing the reading environment in the premises of various colleges and universities. The amount of information available on green library and sustainability is limited but continues to grow. Inter related contents of green libraries and sustainability has received a great deal of coverage in recent years in various publications targeted towards green libraries. The idea of creating green libraries is transforming into a library movement by building green library buildings, by greening existing library facilities, providing green library services, and embracing environmentally supportive and sustainable practices within the library. Green libraries are designed to minimize negative impact on the natural environment and maximize indoor environmental quality by proper site selection, use of natural construction materials and biodegradable products, conservation of resources like water, energy, paper, and responsible waste disposal recycling, etc.

Review of Literature:

Antonelli (2008) elaborated the different web page and websites related to Green Library Building. Trotter (2008) in a paper entitled Going for Green, elaborated that the few green libraries and provided tips for increasing green libraries initiatives.

Sahavirta (2012) in the article revealed that commitment to green values may increase environmental sustainability and help libraries to take a new and visible role in changing

Divya and Vijayakumar (2013) in their paper rightly pointed out that this is the right time for librarians to support green library movement etc.

Bhattacharya (2017) stated that the Green Library contributes towards maintaining the natural ecological balance in the environment and preserving the planet and its natural systems and resources. Meher and Parabhoi (2017) focused on the importance of green library in ongoing era and green library initiatives in India like Madras University Library, Karnataka university library Dharwad, Mumbai university library.

Objectives

The main objectives of this research paper are as follows:

- To explain the green library concept and its importance in India.
- To describe the crucial elements of the green libraries.
- To examine the initiatives and challenges of Green Libraries in India.
- To suggest measures to promote green libraries in India.

Green Library Movement in India:

Indian libraries focus on having natural lights, energy saving bulbs in the reading rooms and other places within library premises, provision of natural air, emphasis on cleanliness, hygienic toilets, adequate provision of waste bins at appropriate places, proper disposal policies for weeded library materials and equipments. In the state of Kerala, Centre of Science and Technology for Rural Development (COSTFORD) focuses on development of housing and made significant gains in providing alternative philosophy and technologies in order to provide green environment in educational institutions.

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 uses natural and regional construction material, minimize consumption of water and electricity, and also use environment friendly technology. 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. Buildings can be designed in a way where one category helps another category to fulfill its goal of good and sustainable design. The five elements of green libraries are discussed below.

1. Site Selection: Library is the heart of any institution or university or any department. It should be located at an appropriate site or locality so as to make users to concentrate on their reading or studies. Accessibility or connectivity through public transportation is one of the factors, 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 (IGBC) to develop green library.

2. Water Conservation: It is one of the essential resources required everywhere in houses as well in offices. Water is scarce and valuable hence, need to use very carefully and economically. Any library should have proper water management system that helps in keeping library clean, hygienic and green. There are many different ways for libraries to conserve and make optimum utilization of water like having rainwater harvesting system, use of low flow fixtures, and waterless urinals. Besides, libraries can reuse waste water and rainwater for plantation and gardening, and flushing in toilets.

3. Energy Conservation: As the use of energy is unavoidable, its consumption should be reduced to the maximum possible extent. In a library, energy can be saved in many ways having enough number of windows, glass windows, by using natural light from outside through windows and other passages, using energy efficient bulbs and lights. The required electricity can be generated using direct sunlight by planting solar system on the roof top of library buildings. If necessary, the surplus energy can be conserved and used when extra energy is needed in library.

4. Construction Building Materials: The idea of developing any green library itself, requires the construction of library building which promotes green and nature friendly environment. 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.

5. Indoor Air Quality: Nowadays a fresh, healthy and breathable air is one of the important factors in enhancing good air quality. Particularly, inside the library building there is the need of a quality air. Proper plantation is needed in the surrounding campus for providing clean and pure air and also make library a cool place. Basically, trees give pleasant air and reduces the use of air conditioner operation during summer season. In hilly areas, library building should be in a sunny place so that it has little warmer and reduces room heater and blower expenses during winter season. Further, proper arrangement should be made for air circulation and ventilation. It is also suggested that a green building need to be designed in a way that air gets recycled and does not stay stagnant.

Indian Standards for Green Library:

In India GRIHA and IGBC have been established by the government of India to promote and oversee the activities of green libraries in the country.

Green Rating for Integrated Habitat Assessment (GRIHA): It has been adopted by the Government of India as the national rating system. Keeping in view of the Indian agro-climatic conditions and in particular the preponderance of non-AC buildings, GRIHA has been developed as a rating system which is suitable for all kinds of buildings in different climatic zones of the country. There are about 1,722 IGBC certified projects buildings, 507 certified professionals and also 42 evaluators in India working under this operation.

Indian Green Building Council (IGBC): It is established in the year 2001 to promote and rate green buildings in India. The vision of the council is to enable a sustainable built environment for all buildings and facilitate India to be one of the global leaders in the sustainable built environment by 2025.

Initiatives to Promote Green Libraries in India

As per the latest US Green Building Council report India placed third on the list of top ten countries in Leadership in Energy and Environmental Design outside America. Various green library initiatives have been undertaken in different parts of the country are mentioned below.

- **Anna Centenary Library, Chennai:** The library was established in 2010. It is equipped with modern technology and proper use of light, air, and wood has been made. Gold rating was granted to this library by LEED.
- **Karnataka University Library, Dharwad:** The library was started in 1950. The green library initiative started to facilitate Gurukul system and provide open spaces for group discussions.
- **Mumbai University Library:** The Mumbai University Library was established in 1880. The library was developed using environment-friendly products and ensures proper lighting, providing open spaces for the readers.
- **Madras University Library:** It was built in the year 1907 in the Indo-British style. The windows are designed in a manner that ensures proper lighting of the reading area and the circulation of fresh air.
- **National Library of India, Kolkata:** Indian Library of India is built in colonial style and its architecture looks very nice. The library is built in an impressive structure with Roman beams, tall Corinthian pillars, white roofs, and arches. The white building is decorated with red doors and windows, which is more attractive. Various small trees, green grass, and various statues have been arranged like a park on the facade of the library building, thus enhancing the beauty of this library.
- **NIT, Library, Silchar:** National Institute of Technology Library, Silchar was established in 1977. The library holds knowledge resources predominantly related to Science and Technology, Humanities and Social Science and Management and other allied subjects. Recently, NIT Silchar has invested Rs.44 Crore to create a world-class, innovative, inviting and flexible library system.
- **NIT Library, Trichy:** The Institute has a modern central library with more than two and a half lakhs of documents. Web cameras have been fixed in the Central Library and the entire building is under camera surveillance. Digital Knowledge Centre has been established with 35 modern computers with an internet connection.
- **Delhi University Library:** Delhi University Library System (DULS) has more than 37 libraries in its fold. As good as 64 high quality electronic databases being made available through campus network to teachers, students and research scholars. DULS is regularly conducting innovative Information Literacy Programs for the benefit of students, researchers and Faculty.
- **Calcutta University Library:** It has its own local Network connected with a server with terminals inside the library. Online Public Access Catalogue (OPAC) of the library has databases of books, journals, theses, dissertations, etc. Besides, the University provides access to 7,000 plus electronic journals.

Conclusion

Green Libraries are modern libraries that use environment friendly building materials, make optimum use of natural resources, minimize wastages, make better use of renewable sources and carries its operations in more cost effective and efficient manner. 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. 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 are gateways for knowledge are particularly responsible for disseminating the required information on all issues. It is a known fact that small steps in going green libraries can produce big results over a period of time.

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