International Journal of Research in Library Science (IJRLS)

ISSN: 2455-104X

DOI: 10.26761/IJRLS.9.2.2023.1664

Volume 9, Issue 2 (April-June) 2023, Page: 189-193, Paper ID: IJRLS-1664

Received: 10 April. 2023 ; Accepted: 20 May. 2023 ; Published: 26 May. 2023

Sustainable Development of Engineering Technological Libraries with a Focus on Green Libraries

T. R. Sridevi

RV College of Engineering, RV Vidyaniketan Post, Mysore Road, Bangalore, Karnataka, India

sridevitr@rvce.edu.in

ABSTRACT

The concept of a "green library" or "sustainable library" is a novel one that is gaining popularity among librarians. The goal of the Green Library Movement is to make libraries more environmentally friendly and slow down environmental deterioration. It is made up of librarians, libraries, communities, towns, and college and university campuses. This study focuses on Green libraries and the sustainable growth of engineering technological libraries. This paper focuses on the need and the current status of green libraries and proposes various ways for setting up green libraries. The present state of libraries in both traditional buildings as well as renovated library buildings without the green concept. This is a collective effort fromthe management of the colleges and the library professional to initiate and create/ renovate sustainable development of engineering technology libraries with a focus on green libraries.

KEYWORDS: Green Libraries, engineering colleges, environments, sustainable libraries, libraries.

INTRODUCTION

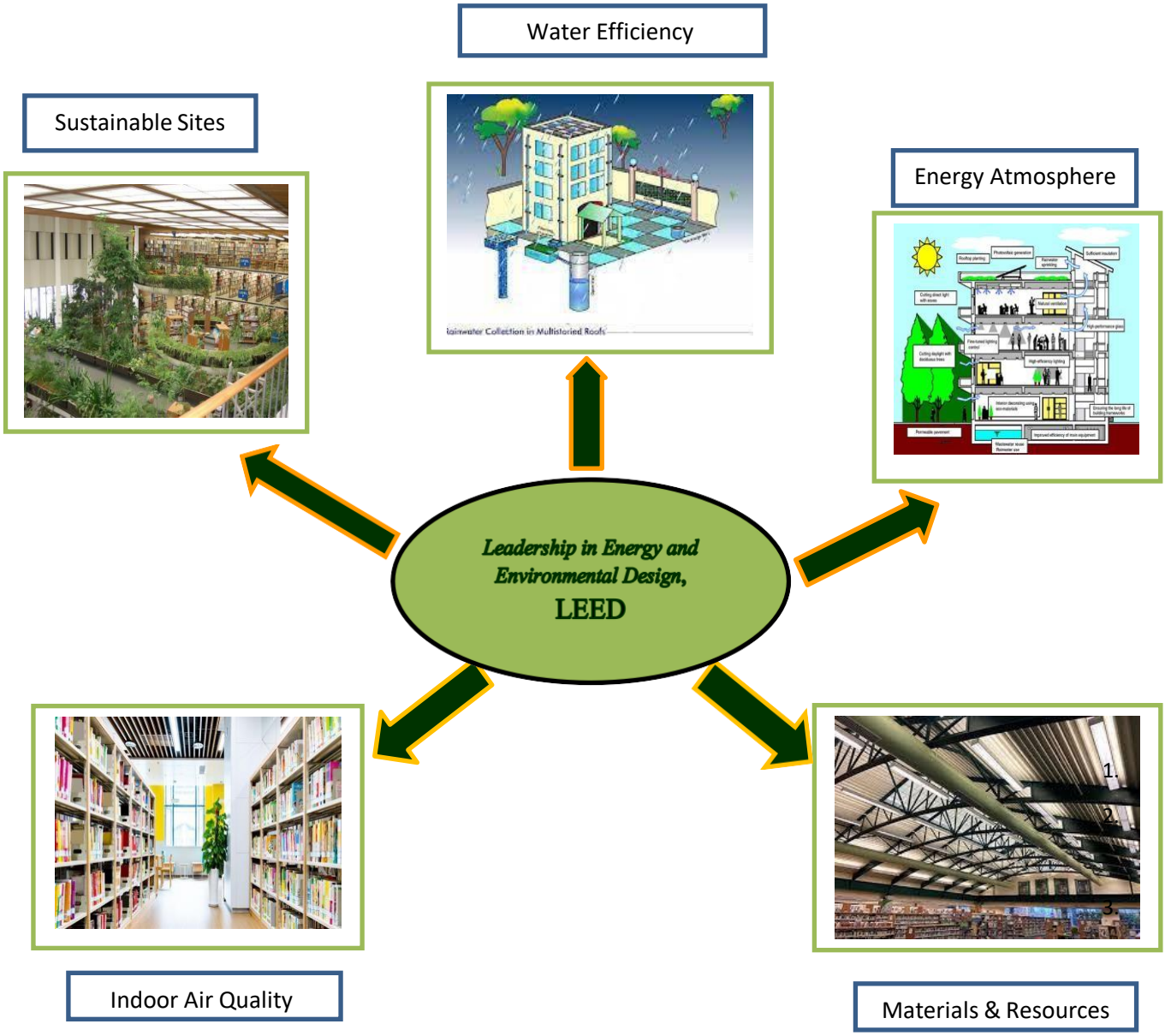
The sustainable library is another name for the green library. This was constructed with consideration for the environment. It belongs to the green building trend as well.

Libraries serve as both knowledge centers and vital tools for raising public awareness of environmental issues. This green concept library will have sunlight and fresh air, but it is important to choose/identify the area/land consumption of energy, different materials used, andthe consequences on human health when developing these.

The idea of a "green library" encourages us to use less water and energy by constructing the structure to make the most of available natural and renewable resources and to incorporate actual plants into the architecture.

The Leadership in Energy and Environmental Design (LEED) grading system was created in the United States by the non-profit United State Green Building Council in 2000. For the purpose of evaluating a building's sustainability, LEED considers 5 separate criteria.

1. Site location 2. Water Efficiency 3. Efficiency of Energy 4. Components 5. Air QualityIndoors



Source: www.google images.com

LITERATURE REVIEW

Authored by Puspanjali Mehar and Lambodara [1] the study Green Library: An Overview, Issues with Special Reference to Indian Libraries discusses environmental conditions, their effects on society, and efforts of leading organizations towards eco-friendly earth, developed standards, and characteristics ofgreen library initiatives in India and abroad. The UNDP, the India Green Building Council, and LEEDare also discussed by the author Puspanjali Mehar and Lambodara [1], they also concentrated on green libraries and discussed the function of contemporary librarians in creating them. According to Puspanjali Mehar and Lambodara [1], the government should support green libraries and provide guidance to all libraries on how to create them.

Malgorzata Fedorowicz-Kruszewska [2] is the author of the paper Green Libraries: Barriers toConcept Development make an effort to explain why there is still little interest in the topic of green libraries on a global scale by highlighting obstacles to the concept's theoretical and practical development.

The author Malgorzata Fedorowicz – Kruszewska [2] also draws attention to the difficulties inputting green libraries into practice, such as the absence of green library norms and evaluation standards. The author talks about library activities that are frequently transitory in Guidelines for the Organisation of Green Libraries.

Anindya Bhattacharya [3], the author of research on green libraries and their applications in contemporary library services, explains how and why libraries are going green. The author also emphasizes other eco-friendly practices, including using electricity wisely and improving indoor air quality and pollutants. Anindya Bhattacharya [3], the author, goes on to discuss the green library standards, which are important for their implementation. The author also lists the most significant global green library efforts.

The authors of the paper Going Green: Libraries for Sustainable Development, Prashanth M and Vasudeva T M,[4], discuss various methods for greening libraries in addition to the building. They also offer ideas and techniques for greening already-existing libraries. The author of "The Need for Green Library" discusses the requirements for a green library, which include reasonable costs, societal commitment, energy, and water conservation, as well as the reduction of carbon footprints.

The authors Prashanth M and Vasudevan T M [4], also highlight techniques for greening libraries' resources, furnishings, and equipment. The author claims that there are ways to maintain a green library, such as avoiding using library cards since they are made of plastic, completing an online membership form and collecting relevant paperwork electronically, and using LED lights and tubes. The authors Prashanth M. and Vasudevan T. M. [4] conclude by stating that librarians should serve as role models for sustainability by offering appropriate and pertinent information on environmental challenges.

Sunil Rabidas [5], In his paper, Green library buildings: A Sustainable Process explains what green libraries are, how they are accredited, what is needed for them, and what the future of green libraries in contemporary India would be. Some of the green libraries in India and overseas are highlighted by author Sunil Rabidas [5] which will be helpful for future use by library professionals. The author Sunil Rabidas [5] emphasizes in his final statement that the next generation of library professionals should focus on proactive actions for the future sustainable development of libraries rather than just environmental sustainability as demonstrated by various practices of greening libraries.

OBJECTIVES

- ✓ To review the need for a green library in the engineering technology library.
- ✓ To review the current status of the green library in the engineering technology library.
- ✓ To review and propose a green library setup for the engineering technology library.
- ✓ To make the library more renewable.

METHODOLOGY

This article is based on a conceptual idea. The conceptual foundation is based on earlier research works on contemporary innovations. Various search engines like Google, Google Scholar, etc. were used to conduct the literature survey. The study's primary source of secondary data is a compilation of research journals. This article is more educative for use, for those who are involved in developing green libraries for research work or implementation purposes.

DISCUSSION

A. Need for Green Library

There are several reasons why libraries would need to build green or incorporate green features into their buildings. The cost of constructing green buildings will become affordable. The library is not only a storehouse of knowledge but also an important resource for creating awareness about the environment. The maintenance of green libraries is also an advantage as it creates natural ventilation which creates a good environment.

B. Current status of the green library

Green technology services for users are getting more and more necessary as time goes on. Libraries are well-positioned to raise awareness of the environment. Reusing materials, cutting down on waste and hazardous products, and creating alternative technologies can all be facilitated by libraries.

Green technology puts an emphasis on the environment in a world where the population is expanding quickly. Libraries are not an exception to the fact that this technology is being given a lot of attention in organizations. The design of libraries must adhere to the green building philosophy, which has no negative effects on the environment.

Libraries are in a great position to encourage environmental awareness and act as ecological operators. It aims to examine this recently developed idea as well as the role of librarians in making libraries greener for a nice and healthy atmosphere.

C. Propose a green library setup for the engineering technology library in several simpleways

i. Using CFL lights instead of tube lights which will save energy and be good for reading in the library.
ii. Water can be stored in water collection trenches and used for garden plants.
iii. Rare books and other documents can be scanned through a high-end scanner and digitized in order to preserve paper,
iv. Use digital books and e-journals to conserve space and paper.
v. Use of Environmentally friendly pest control.
vi. Use environmentally friendly pleasant wall paints to increase light reflection in all areas in the library.
vii. Replace the old lights and fans in the library when they are not in use with better environmentally friendly equipment.
viii. Installing centralized servers will also be a part of energy saving.

D. To make the library more renewable

For example, Austin Central Library [6], The tall, six-story structure was designed with effectiveness in mind. Its layout was meticulously planned to make use of natural lighting and cooling, and it has large windows throughout. Modern rainwater collecting systems supply water for toilets and watering outdoor spaces. Temperature and light levels can be effectively adjusted using electronic window treatments. It all adds up to a LEED Platinum accreditation,making the cutting-edge library in Texas' state capital one of the nation's greenest buildings.

The rooftop solar system, though, steals the show. The system's remarkable 182 kilowatts of power are generated by a total of 567 solar panels arranged into three arrays. This will drastically lower the enormous library's monthly energy expenses and carbon footprint by covering a full third of its overall energy consumption. The Austin Central Library offers a fantastic space for Austin residents to gather together, learn, and participate in a group conservation effort. It is a striking example of environmentally and socially responsible design.

SUMMARY OF DISCUSSION

1. Libraries need to have efficient ventilation, a green roof, rainwater collection, and improved indoor air quality, among other reasons why green buildings are necessary
2. The environment is prioritized by green technology in a world where the population is growing swiftly. The fact that libraries practice technology conservation is a general rule. Additionally, this lessens carbon footprint.
3. The following might be included when proposing a green library setup in an engineering technical library: green materials, neighbourhood cooperation, green roof, raised floor system, energy efficiency, natural ventilation, etc.
4. We must decrease the carbon footprints of our buildings if we want to revive the library by lowering pollution. The entire amount of greenhouse gases created to directly or indirectly support human activities is referred to as the carbon footprint and is typically stated in equivalent tonnes of carbon dioxide (CO2).
5. We can use paper in an efficient way, meaning that if a single piece is saved, a tree will alsobe saved. Papers shouldn't be thrown away. We must efficiently utilize the paper's two sides. Papers should be successfully recycled or repurposed. To save paper, we can also digitize rarebooks.

CONCLUSION

By sharing suitable and useful information on environmental issues, library professionals can assist the green movement and set an example for sustainability. As library buildings are independent structures in many engineering technology colleges, they fall under the category of non-recurring structures and should be designed for long-term investments made for the benefit of the community. Consequently, when designing them, architects must consider a longer lifespan.

REFERENCES

[1]. Puspanjali Meher; Lambodara Parabhoi: Green Library: An Overview, Issues with Special Reference to Indian Libraries. International Journal of Digital Library Services, Vol 7 Issue- 2.April – June 2017. Pg: 62-69.

[2]. Malgorzata Fedorowicz –Kruszewska: Green Libraries: Barriers to Concept Development, Library Management, Vol 44, No. 1/2, 2023. Pg: 111-119.

[3]. Anindya Bhattacharya; Green Library and Its Utilities in Modern Day Library Service: A Study. International Journal of Next Generation Library and Technologies, Vol 3 Issue 3, 2017,Pg:1-9.

[4]. Prasanth M; Vasudevan T M; Going Green: Libraries for Sustainable Development, National conference on Innovations and Transformations in Libraries, February 2019.

[5]. Sunil Rabidas, Green Library Buildings: A Sustainable Process, International Journal of Advanced Research and Innovative Ideas in Education, Vol-2 Issue-6 2016, Pg: 342-346.

[6]. Web Link: https://solar-to-the-people.com/solar-libraries.
