

## **Academic Library Services based on Web Technology for Environmental Sustainability in Libraries and Their Implementation in Chetana's Mansukhlal Chaganlal Library**

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### **Abstract**

*The places of green practices services which are incorporated with in libraries towards environmental sustainability have surfaced in recent history. With continuous use and easy vacuity of new technologies like computer printers, faxes, and print copiers etc., guarding the terrain has come a major concern as all the machines have an impact on the terrain through the use of paper, essay, and electricity. This paper explains environmental sustainability, web technology and the paperless library services among others. Further, it demonstrates the various sustainable strategies for the libraries. And highlights the strategies for prostrating the impact of paper use, essay use and electricity. The adverse impact of new technologies on the terrain also increases the demand of green practices services within libraries and reducing the carbon footprint, which will automatically enhance the environmentally sustainable practices, a precious step for enhancing the life of society. This paper provides a necessary approach for librarians to achieve green practices services.*

### **Keywords:**

*Sustainability, Environmental sustainability, Libraries, Green printing, Green copying, Library Portal, Web Technology*

### **Introduction**

Global ecological devastation and resource shortages have posed substantial obstacles to the sustainable development of human civilisation. As a result, addressing environmental issues and advancing environmental education globally have become as significant and widespread social issues. The harmful effects of climate change have recently become clear. Concern about climate change has in fact brought about a worldwide miracle in terms of sustainability as a goal. As a result, environmental awareness and sustainability are becoming hot topics in the world of libraries. Most definitions of sustainability include frugality, terrain, and equivalents. Thus, sustainable development should address financial factors (saving resources) as well as environmental concerns.

In order to lessen human influence on the environment and advance sustainable development, a library might adopt a number of practises, including the building of sustainable architecture. In other words, the library buildings must be built with minimal reliance on electricity and incorporate features like rainwater

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collection. Similar behaviour must become ingrained in a librarian's daily routine in order to serve as a springboard for environmental mindfulness and to affect behavioural changes in the neighbourhood. .

### **Sustainability in the Environment**

Scientists at the World Bank are likely the ones who initially investigated the term. The phrase "environmentally responsible development" was first used (World Bank, 1992). (Serageldin and Streeter, 1993) More recently, "environmentally sustainable development" has been used. The idea of environmental sustainability eventually emerged (Goodland, 1995). Environmental sustainability, in the words of Goodland, "seeks to improve mortal weal by guarding the sources of raw materials used for mortal requirements and icing that the cesspools for mortal wastes aren't exceeded in order to prevent harm to humans." Goodland's definition of environmental sustainability fits into the "limits to growth" framework of there source-limited, ecologically profitable economy. The definition of environmental sustainability is "responsible commerce with the land to prevent depletion or decline of natural resources and permit long-term environmental quality." Environmental sustainability is a practise that makes it possible to meet the needs of the current population without endangering the ability of future generations to do the same. One of the pioneers of ecological sustainability, Herman Daly, approached the issue from the perspective of protecting natural capital. He argued in 1990 that for renewable resources, crop growth should not outpace rejuvenescence(sustainable yield);

- For nonrenewable resources, the reduction of the nonrenewable resources should bear the similar development of renewable backups for that resource.
- For pollution, the rates of waste generation from systems shouldn't exceed the assimilative capacity of the terrain (sustainable waste disposal).

The OECD Environmental Strategy for the First Decade of the 21st Century (OECD, 2001) made a significant contribution to the idea of environmental sustainability. The Plan outlines four distinct standards for environmental sustainability. Assimilation (releases of hazardous or contaminating substances into the terrain shall not exceed their assimilative capacitance) and rejuvenescence (renewable coffers shall be used efficiently and their use shall not be permitted to exceed their long-term rates of natural re juvenescence), substitutability (nonrenewable coffers shall be used efficiently and their use shall be limited to situations which can be neutralised by negotiation with renewable coffers or other forms of capital), In order to improve affordable and successful environmental programmes in the context of sustainable development, it specifies five interconnected objects. maintaining ecological integrity through efficient use of natural resources separating environmental constraints from successful expansion enhancing data for decision-

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making and tracking advancement with arrows. The interaction between society and the environment improves quality of life. Environmental interdependence on a global scale is promoting collaboration and good governance.

### **SHRI MANSUKH LAL CHHAGAN LAL LIBRARY**

The former Maharashtra Education Minister Shri Madhukar Rao Chaudhari constructed the library of the Smt. Kusum tai Chaudhari College of Trades and the Hazari Mal Somani College of Commerce & Economics in 1970. The council's goal is to educate members of the lower social strata. The library is situated at the base of the municipal building. It currently contains a large collection of 539 CDs and videotapes, 346 set volumes, and 110242 books. The librarian, along with other professionals and semiprofessionals, has created a space in the library that is welcoming to marijuana users, and they are successfully managing the space and providing quality library services. SLIM21 Library Software totally motorizes the library. With the aid of this programme, the library's entire workload is completed.

Additionally, it features a book bank installation for the needy and deserving students as well as Internet installation for preceptors and scholars. The last time, lower council scholars were also provided with book lending services. Additionally, the library offers services including bibliographies, interlibrary loan installation, current awareness, and references. The purpose of the library orientation programme for newcomers is to accustom them to the facilities and services of the library. This enables the students to spend the allotted library funds in a fashionable manner. Additionally, it plans special book exhibitions for other events. All of our students have free access to our library.

### **Environmental sustainability best practises at Chetana's Mansukhlal Chhaganlal Library:**

A green library is one that is built to have as little of an adverse effect on the environment as possible. To create a sustainable library or green library, we must take some steps . The following are some traits of a green library:

Books may be preserved using natural products.

Laptops that utilise less power than desktop counterparts

By offering a scanning service rather than a xerox, paper usage is reduced.

As readers tickets are made of plastic, avoid them.

Online membership with only digital copies of the accompanying paperwork.

OPAC may be offered in place of the card catalogue.

Paper receipts can be substituted by electronic ones.

## **Use of resources**

Electronics with the highest star ratings for mini mising electricity consumption Daytime illumination of the library using natural light Using LED tubes and bulbs for lighting. Making use of web 2.0 and web 3.0 technology, provide online services.

The library building may be fitted with solar panels to produce energy from the sun. The structure of the library might be modular so that the staff members could work together to create solar energy and roof-top greenery. Growing indoor plants may improve the air quality. Services offered by academic libraries via Library Portal: A library can provide consumers with a variety of library services. The ability to offer services through a mobile library portal interface is now crucial for an academic library thanks to technical advancements and the rising popularity of smartphones with internet access.

**Web OPAC/Mobile OPAC Service** – Our library has successfully transitioned from an outdated card catalogue system to a paperless, environmentally friendly Web OPAC system. Giving a user who is researching a topic or studying a different subject access to the library catalogue, portable exhibit information, subject guides, and other document searches is crucial.

Library rapid access is provided by the New Arrival Notification Services. A notification to library patrons may be sent using the library portal. To check the status of books and their details, you can now use the mobile OPAC system of the library. This service also notifies the user of other notifications, such as the addition of new books to the library, requests for user suggestions, the availability of reserved materials, etc.

**A type of service called CAS & SDI:** Current Awareness Service gives information on recent ejournal articles, mostly to researchers. A wide variety of mobile devices can be used to make it available to users. An example of CAS is the selective dissemination of information (SDI) service, which is primarily for chosen users.

**Library instruction services :** Library instruction services include providing information on how to access electronic documents and recordings of various conferences, workshops, and seminars.

**Service for circulation:** By providing the necessary information related to circulation, such as the name of the person who loaned the material, the due date, or the date on which the material must be returned, and specific fine policies for those who will not return the material within the desired time period through library automation software, documents can be circulated through mobile devices.

**Database browsing-** in the library makes it easier to browse domain-specific databases like NList, NDList, OCLC's World Cat, etc.

**Online resource services:** the library can offer electronic books, electronic journals, web databases, dissertations, photographs, and article databases that can be accessed via a mobile interface.

**Mobile QR codes** - A QR (Quick Response) code can be used to extract data from a transient medium. With any mobile camera phone that has a QR reader, which is freely available online, users can scan that code and interpret the data.

**Audiovisual services (LibriVox, etc.)** – libraries can offer web streaming, live broadcasting, video conferencing services, and instructional television shows (movies, slide tape presentations, etc.).

**Smart phone document delivery services:** Internet usage on mobile and smart phones is growing quickly every day. Therefore, libraries must try to offer their services via mobile phones as well. It will support libraries in their efforts to cultivate positive relationships and offer their current remote users improved services.

**Ask the Librarian** is a service that offers a number of solutions to users' mobile device and smart phone reference needs.

#### **Reference Committee:**

Chetana's College Library established a committee to develop rules and regulations for the efficient operation of library operations. The digitization of library materials and services is on the committee's agenda because it indirectly contributes to a paperless and environmentally friendly library.

#### **Help Desk for Libraries:**

To save both staff and patrons' time, the library has created a help desk where all library-related documents, including membership forms, demand slips, feedback forms, book requisition forms, and suggestion forms, are made available in electronic format.

#### **Programme of Orientation:**

Each academic year, we provide orientation to new students about the library's policies, resources, and services. They gain a complete understanding of the library's resources for information, search options, and amenities. We always increase the use of environmentally friendly library services during orientation programmes.

#### **Library Automation:**

Using the SLIM21 library software, the college library is entirely automated. With the aid of software, the library completed all of its tasks. The books have bar codes, and the library cards for the kids and teachers also have them. One barcode scanner and six barcode readers are available in the library for the circulation of books.

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Reducing the load of other resources such as printers, copiers, and faxes: The following steps can assist minimise the burden of other resources such as printers, copiers, and faxes. When purchasing printers, copiers, or fax machines, choose a model that uses the least amount of power possible when in "sleep" mode. When buying copiers/printers with duplex (two-sided printing) capabilities and fax machines that can scan double-sided pages

- Always create double-sided copies;
- Recycle and repurpose file folders and envelopes;
- Reformat articles and announcements to make better use of space.
- Use central files for hardcopies and try to create scratch pads out of old paper.
- Set our printer to produce papers in duplex mode all the time.
- When feasible, proofread texts on a screen; utilise print preview and spell check before printing.
- Unwanted mailing lists should be removed Using strategic purchasing to steer clear of pointless purchases

### **Conclusion:**

Several human activities are causing this planet to move far away from Green. Today, achieving sustainable development is difficult. By forming eco-friendly behaviours, we can ensure the survival of both the next generation and the earth. The current era's demand for libraries is environmental sustainability. Green Library is a component of environment friendly Library, which attempts to build energy-efficient, environmentally friendly, and healthy buildings. Compared to typical libraries, environment-friendly libraries need to be given more and more consideration. The librarians place a high priority on keeping their libraries tidy and environmentally friendly. In order to allow patrons to spend hours together in library buildings without being exposed to any form of health risk, modern librarians should consider this blossoming concept.

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