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How to evaluate libraries' sustainability? An approach to an evaluation model and indicators

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Abstract:

This paper originated from conclusions I wrote down in doing my thesis about sustainability in libraries. At first it is necessary to understand library's recycling role in society and its sustainable development in basic functions like borrowing and returning books or offering open and free space to the public. Environmental certifications like LEED or environmental management systems (ISO 14000) are not fully compatible with libraries and they lack the understanding of special features of libraries. Oulu University of Applied Sciences is planning a project in order to meet this need and creating an evaluation model and indicators of sustainable development for libraries.

Sustainable areas taken into consideration in evaluating library's sustainability could be space, green IT, strategies, collection management, location and environmental awareness of both public and staff. It is also noteworthy to consider different levels of analysis: users, library staff, decision makers and host organization. Users should be offered recycling points for books and waste, staff should be committed to sustainability and communicate their awareness. Library strategies should include a sustainable point of view. It is noteworthy that the library is often a part of a large organization in a municipality, town or school, college, university etc. If the host organization has an environmental management system, library is most likely a part of that. In cases where there is no environmental policy in a host organization, it is much more difficult to follow one. Sustainability needs commitment from every person in the organization.

As a result of this project, a specific libraries' environmental label and auditing system could be developed which would increase environmental awareness among staff and customers and would make libraries greener, more sustainable, which is the ultimate objective. One can optimistically state that this model could be used worldwide and this project made international from the very beginning.

Keywords: sustainable development, libraries, evaluation, indicators

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Introduction

My personal interest in sustainability and going green has grown over the last years and it started to blossom when I began to write my Bachelor´s thesis about sustainability in libraries. As a conclusion in my thesis I proposed the idea that libraries would need their own auditing system, an environmental label as well as indicators in order to measure their state of sustainability and improve it (Karioja 2013, 32—33). In this paper I present my proposal for an evaluation model of sustainable development for libraries because they are still lacking an environmental evaluation system of their own. This paper concentrates on libraries that already have been built and are "in action", while library buildings designed as sustainable have been left out from this paper.

The Library as a sustainable institution

It is important to define first what a library itself is in order to be able to evaluate its functions. Figure 1 below presents the basic idea of a library. This model is mostly based on a public library, ignoring research libraries etc.

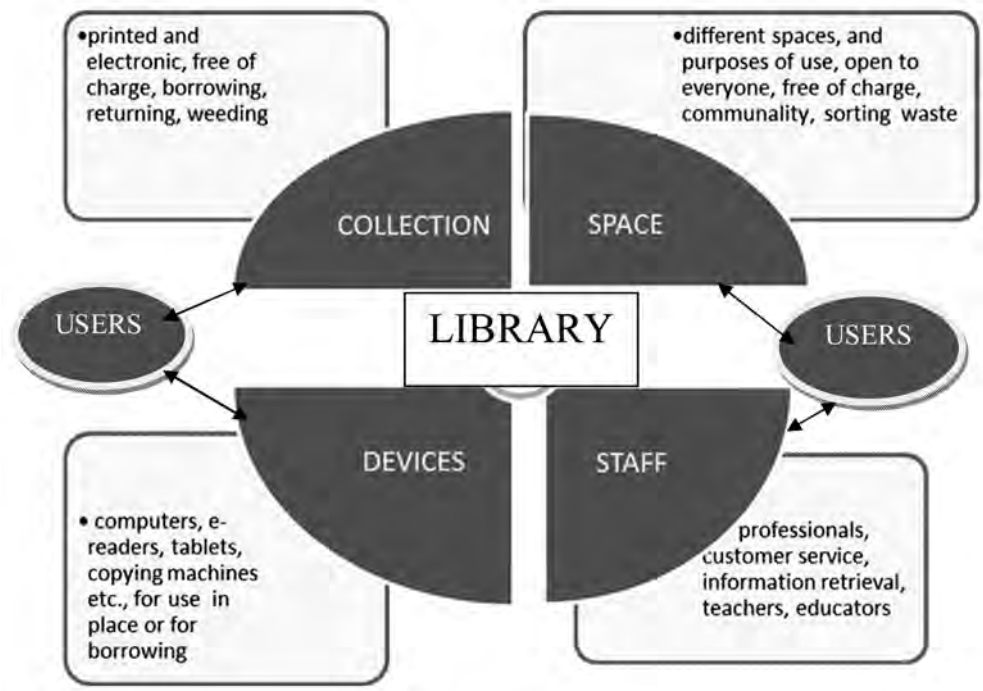

FIGURE 1: Library and its basic functions (made by author).

A library consists of four basic areas: collection, space, devices and staff. A collection can consist of print materials like books, periodicals and music as well as electronic materials like e-books and article databases. Online resources enable library access 24/7, including when the library is closed. Material is available free of charge and can be viewed as a recycling system: it can be borrowed, used and returned again and again.

Library offers open space and also different spaces for different uses like a reading room for newspapers and periodicals, a meeting room and quiet study rooms. Most of the spaces are open to everyone free of charge and they also enable communality when customers come to a common space.

Energy conservation can be achieved when people gather to use the same space and its devices. Several libraries also lend devices like e-readers and tablets for home use in order to let customers learn to use them before making a purchase decision. It is not mandatory to own everything when you can borrow it. Recently libraries in Finland have also started to lend other items like sewing machines and tools. (Vallila library 2013 & Sahavirta 2011.)

Staff in libraries is qualified and professional and hopefully often reflect green values allowing them to work as green educators. Environmental awareness can be increased in cooperation of staff with customers.

Environmental management systems and certificates
Libraries do not have their own specific environmental management systems or certificates; below are a few examples of generic systems used in different libraries. These examples show that environmental systems in libraries can be international and work worldwide. Many countries also have their national environmental systems or certificates, valid within that country. Thirdly, there is a possibility that a certificate is meant for local companies only like EcoCompass in the metropolitan area of Finland.

ISO 14000 family
ISO is the International Organization for Standardization. It has a membership of 160 national standards institutes from countries worldwide. ISO's portfolio of more than 18 000 standards provides practical tools for three dimensions of sustainable development: economic, environmental and societal. ISO has developed standards that help organizations to influence environmental issues: the ISO 14000 family of environmental management standards which can be realized in any type of organization in either public or private sectors. (ISO 2009.) At IFLA WLIC 2012, Ahmed Ksibi (2012) presented the idea that environmental standardization should be used more in libraries.

LEED
The Green Building Rating System LEED (Leadership in Energy and Environmental Design) was developed by the United States Green Building Council (USGBC) in 2000 and it is a program for green design and facilities. The certification is not only possible to achieve for new construction and major renovation but also for existing buildings' operations and maintenance. There is a rating system that consists of six credit categories: sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental air quality, innovation in operations and regional priority. (McBane Mulford & Himmel 2010, 72—73.)

Existing buildings get extra points in the Sustainable Sites category, when there is a possibility for an alternative commuting transportation or a slight pollution reduction. Points are awarded for Water Efficiency if there is a water performance measurement. In the category Energy and Atmosphere a building performs well if using renewable energy. Materials and resources should be purchased following a sustainable purchasing policy. Indoor environmental quality requires a green cleaning policy and the possibility of using

daylight. Innovation in operations means for example documenting sustainable building impacts and regional priority has credits of its own. (ibid., 76—77.)

New libraries built by LEED building regulations are for example West Valley Branch Library in San Jose, California (ibid., 97) and Church History Library in Salt Lake City (Olsen 2011).

Green Office

Green Office of WWF (World Wide Fund for Nature) is an environmental management system for offices (WWF Finland 2013). Oulu University of Applied Sciences Library is part of the Green Office network. The library aims to reduce energy consumption and production of waste and to encourage the sorting of waste items, as well as the environmental awareness of personnel. (Oulu University of Applied Sciences Library 2013.) As Oulu University of Applied Sciences (Oulu UAS) states in its website, the principles of sustainable development are considered in all operations, which means teaching, research, development work and everyday actions. Tools such as Green Office and ISO14001 -environmental standard are used for continuous evaluation and improvement of operations. Oulu UAS wants to take into account all aspects of sustainability in its sustainable development objectives: reducing the carbon footprint, improving eco-efficiency, encouraging work and study wellbeing and enhancing multiculturalism. (Oulu University of Applied Sciences 2012.) All the students enrolled in School of Business and Information Management take a course called Green Thinking, worth 3 ECTS (European Credit Transfer and Accumulation System), in their compulsory studies (Oulu University of Applied Sciences 2013).

EcoCompass

Vallila library in Helsinki received the EcoCompass in Spring 2011 as the first public institution (Vallila library 2013). EcoCompass is meant for small and medium-sized enterprises in the metropolitan area in Finland and a certification is valid for three years (Ekokompassi 2013). Vallila branch library is one of the Helsinki City libraries and also a part of Helsinki Metropolitan Area Libraries which consist of public libraries from Helsinki, Espoo, Vantaa and Kauniainen. There are 63 HelMet libraries and six bookmobiles in this area and they serve more than a million customers. (HelMet.fi, 2013.)

Vallila branch library defines itself as a green, environmentally friendly library that has created a four steps program in order to improve sustainability. The first step is to inform customers about library's commitment to environmental issues. Second, customers need to have easy access to environmental information. In Vallila, they have gathered all eco-related books into one shelf and at the same place brochures made by the environmental center can be found. The library also cooperates with the private organization Kuinoma (Like Your Own), which enables a new kind of lending services, including items like skis, cameras and tools. The third step is to organize events relating to the environment and fourthly, to set a good example to other libraries so that many more libraries could consider themselves as green and affect the opinions of customers and policymakers. (Vallila library 2013.)

Evaluation model of sustainable development for libraries
What are then the factors that should be considered in planning of a specific evaluation model of sustainable development for libraries? Figure 2 shows the areas that could be the factors[2].

FIGURE 2: Evaluation areas for a sustainable library.

In order to evaluate something properly, it should be measured. Libraries would need sustainable indicators of their own. At the early stages, indicators could be like traffic light: red meaning bad, yellow reasonable and green good. Evaluation criteria should consider these aspects too.

Case study of collection management
In the case of a sustainable library it is important to realize libraries' basic function as recycling center where books and other material can be borrowed and returned, endlessly. Taking into consideration the term "collection management", it shows the same cycle that works over and over again. Buckingham (1994, 1) represents the idea of collection management which is shown below in figure 3.

[2] The model made in co-operation with my supervisor, Jorma Niemitalo.

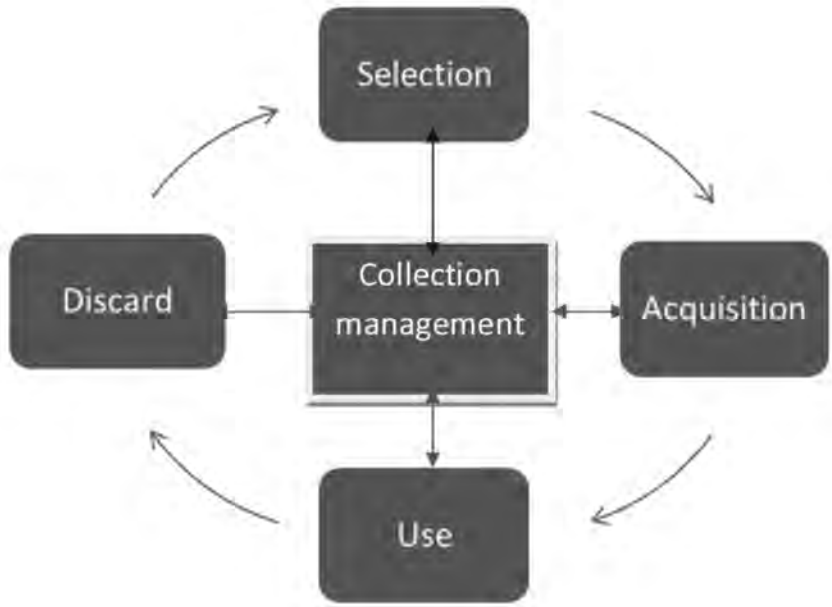

FIGURE 3: Collection management process: selection-acquisition-use-discard cycle (Modified by author from Buckingham 1994, 1).

Discarding or rather weeding is an essential part of libraries' functions. Common weeding criteria are based on poor physical shape, poor format, poor content and inappropriate material. Weeding is needed when items become out of date, damaged or no longer fulfil the needs of their users. From the librarians' point of view, weeding is essential as it makes room for more valuable items, in order to provide a better collection, to make the library easier to use and to provide reliable information. (Buckingham ibid., 7.)

From a sustainable point of view the most important process occurs after this: what happens to weeded material? This would be the point where indicators should be developed and used in order to measure the state of sustainability. At the early stages, the indicators could be one point for every measure that has been accomplished (see figure 4) and the maximum score in collection management would be 5 points. At a later stage more precise indicators could and should be developed.

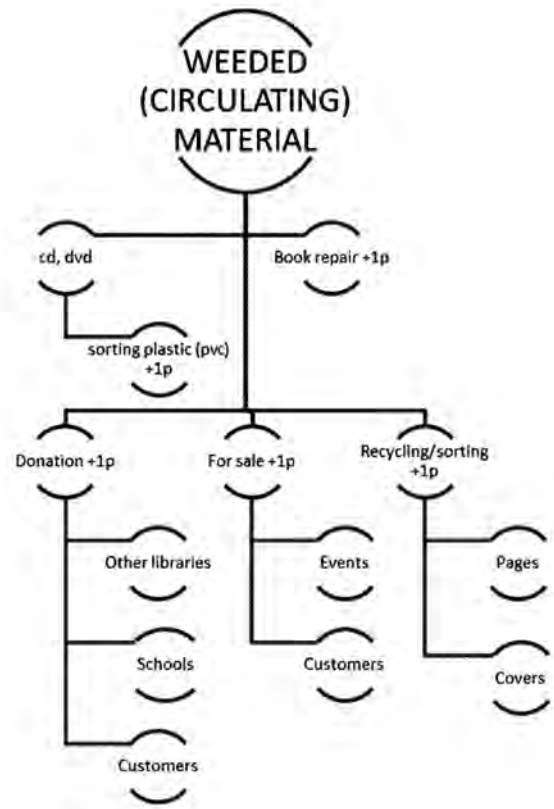

FIGURE 4: Weeding process from a sustainable perspective (made by the author).

It is noteworthy that libraries also lend materials other than books like CDs and DVDs which should be recycled after weeding. Book repairing extends the time of use and is sustainable. The most ordinary procedures after weeding are donation, sale and recycling.

Other evaluation areas

Besides collection management, the other evaluation areas are space, green IT, strategies, location and environmental awareness. Even if it is not the aim of this paper to discuss sustainable library building, the importance of **space** is significant in evaluation. This should be taken into account already at the building phase as LEED certification states. Modifiability is also an important part of a sustainable library space. Consumption of water should be monitored and air conditioning should be kept at a level that does not use too much energy but sufficient to maintain the quality of the preservation environment.

Tomlinson (2010, 2—3) describes **Green IT** in two phases: It means firstly growing concern about environmental issues across many human communities, secondly the use of digital tools and techniques for manipulating information, and both of the social phenomena that surround these systems. Green IT brings together two areas, environmental issues and IT,

and explores the ways in which they connect to each other. In practice this means preferring duplex printing, recycling removed devices, switching off lights at the end of the work day etc. 21st century libraries cannot work without IT, so it is advisable to make them greener. Sorting of WEEE (waste electrical and electronic equipment) is also essential in a phase when old and broken computers and other devices are being replaced with new ones. Green electricity should be favored in case a library has a possibility to choose their electricity supplier.

Strategies as a sustainable evaluation area in libraries mean networking with partners in cooperation. A library needs to be in good relations with its host organization in order to affect sustainability. Sustainable development should be seen in policies of a library and its host organization. Often a library is a part of a bigger unit and it has to obey the rules made by the host organization.

Location is also important for a sustainable library; it should be achieved by public transport or by bicycle. A library should be located in a place where people go to run their other errands near schools, kindergarten, shops, sport centers etc. One possibility could be a library as a community center where services from different fields could be under the same roof. In Finland mobile libraries are already providing multiple services like health care, pharmacy, laundry and postal services.

Environmental awareness of public and staff should be increased with the help of theme weeks and events. A sustainable library should have a person in charge of environmental issues and employers should offer training concerning sustainability. This would be the way to achieve an attitudinal change towards sustainability among staff and spread enthusiasm to customers as well.

Levels of analysis

In evaluation should also be considered levels of analysis: individual, program, organizational and societal (Nicholson 2004. In a sustainable library this would mean users, library staff, decision makers and host organization. For users should be offered recycling points for books and waste, staff should be committed to sustainability and spread their awareness. Library strategies should include a sustainable point of view. It is noteworthy to remember that library is often a part of a large organization in a municipality, town or school, college, university etc. If host organization has an environmental management system, library is most likely a part of that. In case there is no environmental policy in a host organization, it is much more difficult to follow one. Sustainability is something that needs commitment from every person in the organization.

Conclusions

It is absolutely necessary to develop this model and test it in a library in order to actually improve sustainability in libraries. Now it is time for actions, no more excuses and fine speeches! Oulu UAS is planning a project concerning this subject. The aim of the project would be to create an evaluation model and practical indicators of sustainable development for libraries. Current environmental certifications and environmental management systems are not compatible with libraries or lack the understanding of special features of libraries. With the help of this project libraries' own environmental label and environmental auditing

system could be developed. This would increase environmental awareness among staff and customers and would make libraries greener, more sustainable, which is the ultimate aim. In the future libraries could work according to principles of green management. We can optimistically hope that this model could be used worldwide and make this project international from the very beginning.

At first there would be a need for international partners in cooperation, both libraries and universities, in order to start the project. Research is needed on measuring sustainability and on how to evaluate it. Indicators would be created and tested in libraries. The project aims at starting at the end of 2013 or early 2014 and it should last approximately two years.

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