

“Ecological Sustainability in Libraries as a Necessity to overcome the Digital Divide”

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Abstract

In this paper we want to explain the role and necessity of ecological sustainability in libraries to overcome the Digital Divide. Digital Divide is not only the physical connection to the internet. It has also a multidimensional aspect. We want to have a closer look at one aspect of such a physical workplace. This shall be the ecological sustainability of library buildings. Only by supporting the ecological sustainability the sustainable use of a library can be guaranteed and only in that way it can be ensured that the Digital Divide will be overcome in a sustainable way.

Introduction

As we face one of the greatest challenges in the history of mankind the library with its services will become one of the crucial institutions on this planet. The Climate Change is a global crisis and can only be dealt with in a global manner. A collaborative effort of all the different societies and of every individual citizen of this planet is necessary to combat the consequences of the climate change and prevent further decline of the world's climate. The need for information in this issue is a global necessity. The internet as a global network will provide the essential information to tackle with that important task. But the rapid development of the internet with its countless services poses also a challenge for the people. Some are left behind for various reasons and so the digital divide in the society is expanding. Here the library comes into play as a place where citizens can access the internet and use the information and for teaching the citizens media and information literacy. With reliable information, provided in libraries it is possible to sensibilise the patrons and the whole society. Only than it is imaginable to combat the climate crisis and act responsible for the planet, for the society and for the people. Providing this important space in an ecological sustainable way enables us to bridge the digital divide in a sustainable manner. It also helps to minimize the environmental impact of library buildings. In this way we act against the climate change from two different sides. Libraries can set an example and demonstrate their social responsibility by acting environmental friendly.

Description

Digital Divide

The future will be global, connected and more and more digital. With the internet enabling that future the connection to it becomes essential. But the physical connection via a DSL line in urban centers in Western Europe or via a mobile phone in the planes of eastern Africa is not the only indicator on which side of the digital gap one is finding her or himself. The reasons are multidimensional. The social, cultural and political situation on the continent, in the country and in the city plays an important role too. Not only the connection to the internet poses a challenge for the individual and for the society as a whole, but also the literacy to find, evaluate and use the information from the internet in a responsible manner.

A successful future of a society with its economy and its people at a globalized planet depends on the active and responsible participation of all its citizens in the digital world. A comprehensive strategy for the electronic inclusion of all parts of the society has to recognize these multidimensional factors. One of these factors is the actual physical place. This space can be the sunny outside nature in Africa or the time-honored reading room of a library in Europe.

To provide this space in a library for future generations it has to be designed in accordance to the rules of sustainability.

Sustainability

Sustainability is a concept first arisen from the field of forestry in the 18th century. Foresters became concerned since wood was one of the driving forces in the economy. The Brundtland Commission of the United Nation says: "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Sustainability consists of three important parts. The three pillars demonstrate environmental, social and economic demands. People in the western world consume more than their fair share. We have to support fair distribution and efficient allocation of our resources. We need a balance between our economic growth and the ecosystem. The social pillar supports initiatives like: peace, social justice and reducing poverty. Natural resources are not unlimited. The environmental pillar supports initiatives like: renewable energy, sustainable agriculture, recycling and much more. The model of the three pillars also influences activities for reducing the environmental impact of buildings.

In recent years more environmentally-friendly architecture, popularly called "Green Building", has grown significantly. There are some of environmental programs, for example the LEED (leadership in energy and environmental design), which certifies new and renovated building projects. Aspects of validation are for example the utilization of renewable energy and recycled materials. Sustainable technologies become more mainstream and more affordable.

Data Description

Project

During our last semester at the University of Applied Sciences Potsdam we worked at a project about ecological sustainability in libraries. Therefore we examined important facets of ecological sustainability at a currently build magazine store of the Humboldt-University Library in Berlin.

After years of temporarily storing their stock in different buildings, the University Library of the Humboldt University Berlin wants a permanently, stable and sustainable solution, which allows low running- and administration costs and a secure and appropriate storage of the stock. Therefore a new magazine storage building is planned.

For minimizing the running costs, the University Library wants an automated storage and retrieval system which handles the management and administration without staff. It is also important to check, whether it is possible to reduce costs by saving space and reducing the investment needs for fire-protection and the shelf-system. The saved money could cover the expenses for the necessary robot-system.

For the ecological part of this project, a cooperation between the Humboldt University Berlin and the University of Applied Sciences Potsdam was established. We, the students of the University of Applied Sciences Potsdam, designed the ecological concept for the new storage building. We based our work on the right temperature and humidity for books in relation with the outside changes.

We decided that the structure and the insulation should be out of wood, a natural and renewable resource, which is available from sustainable cultivated forests. These forests are certified from the Forest Stewardship Council. For the front of the building a facade greening is planned, which is not only a pleasure to the eyes, but will improve the climate of the city. The roof should be covered with photovoltaic cells. With their help, the sun's energy will satisfy the requirements of electricity the building will have. In Germany solar energy is supported by the government. The building does not need an air conditioning system. A natural ventilation facility will meet the conservation requirements of the stored books.

Another important aspect of the new building project is to consider the advantages which ecological buildings can provide, for example saving running costs. Instead of using a costly air conditioner, a passive building adapted to seasonal changes in temperature and humidity is inexpensive not only in its acquisition costs but also in the long run and therefore to be preferred.

Findings

During the project it became clearer and clearer how necessary it is to act ecological sustainable. It is an important factor for the protection of our environment, especially in times of Climate Change and the resulting natural catastrophes like the sea-level rise, hurricanes, increasing drought or melting of the arctic icecaps and glaciers in more and more parts of the world.

The library with its significance role of acting as a role model in society has to assume a leader function in this development. As a public and academic place it has the possibility to be set a good example and develop awareness for such topics and problems in its patron's mind. And only like that the importance of the message can be spread. It is necessary for our environment that the awareness of ecological sustainability expands and also for every single person and in our example, for every patron or staff-member.

It is not only the climate which will benefit from responsible acting but also the library as an institution. Because acting sustainable e.g. saving water, energy, etc. means saving money. So this means also an economic advantage for the library.

But most important is the factor health, which will be improved. An ecologically sustainable environment is a healthy environment. It ensures the well-being and concentration of patrons and staff and therefore guarantees a productive work which is the main objective in a library.

So it is obvious that acting ecological sustainable and providing such a place is a requirement to bridge the digital divide. This means that one of the future tasks for librarians is to set an example by acting in a sustainable way and providing such a healthy place for the generations to come. The easiest way to do that is to provide an environmentally friendly building where patrons can learn and work. Only in that way we can ensure that the Digital Divide will be overcome in a sustainable way.

Keywords:

ecology, sustainability, library, building, environmental factors, architecture, digital divide