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EMANCIPATE SOCIAL MEDIA PLATFORM IN INVIGORATING GREEN TECHNOLOGY INITIATIVE FOR LIBRARY SUSTAINABLE COMMUNITIES

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ABSTRACT

When it comes to implementing green innovation strategies, libraries are cautious to do so unless those techniques offer immediate cost benefits. This is because of the perceived risk involved in making investments for the short term with the goal of achieving long-term advantages, which is in contrast to the emphasis placed on short-term quarterly returns in corporate settings. The goal of fully implementing environmentally friendly methods across the entirety of the product life cycle is a valuable endeavour because of the potential for growth that it gives to people who are looking for excitement. The absence of a comprehensive framework that incorporates social media in order to promote the significance of environmentally friendly technology in libraries is the reason for this situation. The purpose of this research is to provide a structural framework that makes use of social media in order to improve the green technology library project. The framework that has been developed will raise the people in the library community's knowledge of the importance of environmental sustainability. The aspects of green library for environment sustainability were obtained from the reviewing articles indicating resources, environmental, material, educational and management as well as factors to implement of the green library; Energy, education and management. This study will establish green library practices to benefit the environment, whether explicitly stated or not, to improve human well-being. Humans are clearly harming the ecosystem. Libraries, as public institutions that improve society, should protect the environment. This research can alert the community to our situation and empower them to change. Libraries realise that their eco-friendly building can educate the public. Libraries are centered on improving humanity; hence sustainability is important. Green libraries often provide environmental education programmes to demonstrate how their architecture and operations reflect these ideas. The significance of this cannot be overstated because society is an essential element of the concept of sustainability. It is important to ensure that library patrons have access to materials while also preserving their health in an atmosphere that is sustainable. There were a variety of recommendations regarding the implementation of a green library towards the environment world. One of these recommendations was to implement a wide expectation building development practices and procedures.

Keywords: Aspects, Factors, Green Technology, Library, Sustainability

INTRODUCTION

Green libraries protect the environment and its natural systems and resources. Natural resource protection, carbon-neutral living, and community service are Green Library goals. This assignment encourages practical and environmentally responsible living and strives to preserve the world's resources for future generations. It improved library operations and taught the community about environmental issues. Libraries' prominent position allows them to model sustainable solutions for the community. Green environmentalism is active in libraries. The green architecture trend presents special challenges for libraries. Books must be secured from extreme temperatures, dampness, sunlight, termites, fungus, rodents, and dishonest readers. Heavy books and many readers on the floor complicate things. Building structure and design must accommodate book, reader, and technological growth. Binks (2014) advises examining the components to evaluate if the library can become a green library. Progress requires factors. Information literacy and teaching can turn a standard library into a green library, according to Kamińska et al. (2021). Sustainable resource quality and trash management assist the environment in this green library. A green library, often called a sustainable library, delivers high-quality services that benefit the environment, according to Khalid et al. (2021). Guest speakers on water-wise gardening, composting, recycling, energy efficiency, and green cleaning are needed to introduce and promote library sustainability programming. The green construction trend includes green libraries.

Libraries must safeguard books from sunlight, moisture, and temperature changes (Verticchio et al., 2021). Green design relies on sunlight to reduce artificial lighting. Book weight is another difficulty at the library. Sustainable design generally elevates flooring to improve airflow, but shelving can be too heavy. Many designers have addressed this issue by specializing in the library. Libraries should be flexible enough to handle space and wiring extensions. Library buildings are long-term community investments. Thus, architects must design for the future and last a century or more. This study will examine green library components and environmental impact. Green library procedures benefit the environment, resource management, and trash disposal, according to Beutelspacher et al (2020). In another study, Laukkanen et al (2022) said a green library, or sustainable library, provides high-quality services that benefit the environment. This article examines eco-friendly library practices for environmental sustainability. Services and their influences on green library implementation will be examined in this paper. For service effect, we focus on resources, environmental, materials, educational, and management. These factors drive green library implementation in the environmental domain. Energy, education, and management drive green library implementation. The rest of this paper follows this structure. Literature review is in Section 2. Section 3 proposes a framework. The final section contains conclusions.

MATERIALS AND METHOD

The framework of this investigation was derived from existing literature. Table 1 below shows there are five variables were obtained from the reviewing articles that indicate **resources, environmental, material, educational** and **management**. In general, the most variable found is assigned by the materials construction in implementation of green library. The table clearly stated various type of variables that can be used by green library services based on external and internal environmental issues and awareness.

Table 1: Implementation Aspects of Green Library for Environment Sustainability

Author	Resources	Environmental	Material	Educational	Management
Malode (2014)	/		/		
Meher & Parabhoi (2017)	/		/		
Shah; Kumar & Shah (2015)		/			
Hauke & Werner (2013)					/
Cardoso & Machado (2015)	/			/	
Sotak & Karpinski (2014)		/	/		
Bayley (2014)			/	/	
Blinks et al (2014)					/

Table 2 shows the study that discuss about the factor to implement the green library. There have three factors to implement of green library; **Energy, education** and **management** Under the factor of energy there have three authors argue about the energy. Each of them has different view related to energy. Whereby there have three authors argue about the factor of education. For the last factor is management, there have only two authors discuss about an education from the previous study.

Table 2: Factors to Implement of the Green Library

Authors	Energy	Education	Management
Kurbanoglu & Boustany (2016)		/	
Kumar (2012)		/	/
Meher & Parabhoi (2017)	/		
Hauke & Werner (2013)			/
Binks et al (2014)	/	/	

FINDINGS

The implementation of a green library to strengthen environmental sustainability needs to be addressed on two aspects such as elements of implementing and aspects of implementing. In Figure 1, we present a study framework based on two variables; factors and aspects to show the relationships for green library technology implementation. At this stage of this research, we consider the two variables are crucial in order for the library to implement green technology.

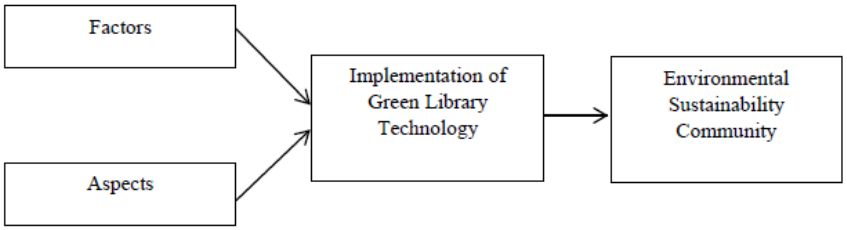

Figure 1: The Relationship Elements for Green Library Technology Implementation

In Figure 2, we suggest that the application of social media to support the element toward the implementation of green library technology that can assist the process to identify the factors and values toward the implementation of green technology for environmental sustainability.

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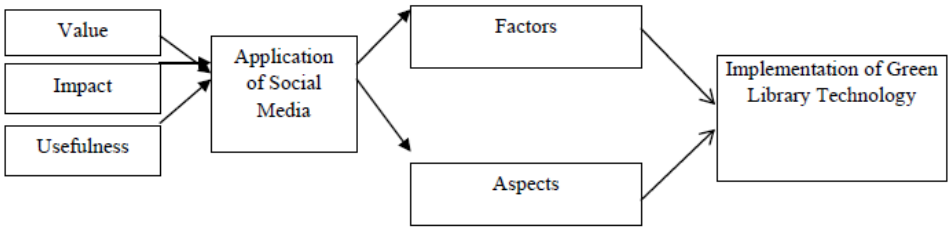

Figure 2: Using Social Media Application to Support the Element Toward the Implementation of Green Library Technology

In the proposed framework, we denote **Value** of social media is important because **Value** relies user understanding of social media in sharing the information of green technology using social media platform. We denote **Impact** of social media relies the effective of using social media to promote green technology in library. Library need to understand the implementation of social media that could impact the effectiveness of promoting green library. The **Usefulness** of social media indicates the implementation of social media that benefit the usage of social media platform to promote green library. The three aspects of social media are proposed to empower the usage of social media as a main platform to promote green library initiative for library sustainability community. The proposed framework implies the propositional logic as, $SM = V_{alue} + I_{mpact} + U_{sefulness}$ where social media (SM) implies the aspect of Value, Impact and Usefulness. Therefore, we denote the implication as, $SM\ (V_{alue}(I_{mpact}(U_{sefulness}))$, In Figure.2, we understand that each social media consists of $V_{alue} + I_{mpact} + U_{sefulness}$. This implies each relationship as $M\ (V_{alue})$, which indicate social media has value toward green library endowment.

$SM\ (V_{alue}{}^{1}\ldots, V_{alue}{}^{n})$, where $SM \rightarrow (\neg V_{alue})$ is implies if it has value on green library initiative. We indicate social media has impact toward green library endowment $SM(I_{mpact})$, $SM\ (I_{mpact}{}^{1}\ldots, I_{mpact}{}^{n})$ where $SM \rightarrow (\neg I_{mpact})$ is implies if it has impact on green library initiative. Lastly, we indicate social media is useful toward green library endowment. $SM(U_{sefulness})$, $SM\ (U_{sefulness}{}^{1}\ldots, U_{sefulness}{}^{n})$, where $SM \rightarrow (\neg U_{sefulness})$ is implies if it is useful on green library initiative. The framework indicates the relationship between social media platform and green technology (GT) initiative as $SM\ (V_{alue}\ (I_{mpact}\ (U_{sefulness})))$ = $GT\ (L_{ibrary}\ (S_{ustainability})$. The relationship implies on the implementation of social media to empower green technology initiative for library sustainability community. The three variables; value, impact and

usefulness indicate on important of social media as a main platform to promote green technology initiative.

CONCLUSION

This study will help establish green library practices to benefit the environment, whether explicitly mentioned or not, in order to enhance the well-being of humanity. There is no longer any serious doubt that humans are inflicting damage to the ecosystem. Libraries, being public institutions dedicated to the improvement of society, should ensure they do not harm the environment. This research can help educate the community about our current condition and empower them to create change. Libraries are realizing that their environmentally-friendly building provides a significant chance to educate the public. Libraries are increasingly focusing on enhancing the human condition and sustainability will need to be a key focus. Green libraries frequently provide programmes on environmental education, illustrating how these concepts are incorporated into their architectural design and operations.

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