

The Green Library Initiative at Universiti Putra Malaysia

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ABSTRACT

UPM Library is committed to play its significant role in supporting the mission of its parent institution to conserve the university environment through various eco-friendly, green activities and quality management systems based on sustainable and efficient environmental management. The case study is written based on experience of the library staff, who is involved in managing the green library initiative since June 2017 and the report that was submitted to the "Administration Management Star Rating Award 2018". In this paper, the green libraries initiative around the world was briefly discussed and its implementation in UPM Library was described into five main elements such as budget, electricity saving, water saving, recycle paper and the initiative/ innovation implemented in the year 2018. In return, there are a lot of benefits after the implementation of the green initiative and UPM Library has shown green leadership capability among the UPM community which is reflected by winning one of the UPM awards that is second placing for the "Administration Management Star Rating Award 2018" during UPM Services Quality and Innovation Day. Green Sustainability is one of the components that were being evaluated for the purpose of this award.

Keywords: Environmental Management; University Environment; Green Library; Universiti Putra Malaysia; Perpustakaan Sultan Abdul Samad

INTRODUCTION

Nowadays, the concept of "Go Green" has been widely embraced in any types of organization either business or education. The concept of "Go Green" means to pursue knowledge and practices that can lead to more environmentally friendly and ecologically responsible decisions and lifestyles, which can help to protect the environment and sustain its natural resources for current and future generations (Samaranayake and De Silva, 2010).

As a higher learning institution at the forefront of the sustainability movement, Universiti Putra Malaysia (UPM) is also fully committed to alleviate and mitigate adverse environmental impacts. UPM is committed to provide services and to be developed

based on the principles of sustainable development and responsible in raising the quality of life and ensure continuity of universal life through Green@UPM Fundamental Goals (Aris et al., 2018). As a result, UPM successfully listed as the world's top 17th university by the UI-Greenmetric World University Ranking. The ranking consist more than 40 indicators and covering six main scopes such as infrastructure, energy and climate change, waste, water and education (Khairul Anuar, 2018). As parts of the UPM organizations, the library also plays an important role in supporting the mission of Green@UPM Fundamental Goals.

From the article reviewed, many academic libraries strive to go green by designing a "green library", whether in the form of a new building or renovation. However, it has been pointed out that only few academic libraries have certain standard or certificate on green concept due to various limitations, either financially or in terms of space and embracing an holistic approach to sustainability practices may be a way forward (Jones and Wong, 2016). Moreover, literature search found that most of the articles regarding green libraries were published from the western and developed countries in Asia. There is still lack of local articles that published on this topic. This paper focuses on UPM Library as a case study and discusses how the library develops and implements its green strategy and how the strategy has gradually reshaped its services. We hope this paper can contribute as a best practices and guidelines for other libraries, especially in Malaysia.

BACKGROUND OF STUDY

Background of UPM Library

The history of the library began with the establishment of the Malaya Agricultural School on May 21, 1931 by John Scott, Government Administrative Officer of the Straits Settlements on the 22 acres of land in Serdang, Selangor. This historic event was witnessed by His Royal Highness the Sultan of Selangor, Sultan Hisamuddin Alam Shah. On 3 June 1947, the Malayan Union Government upgraded the status of the Malaya Agricultural School to Malaya Agricultural College and it was inaugurated by Sir Edward Gent, Governor of Malayan Union (Universiti Putra Malaysia, 2014)

Later in 1971, Universiti Pertanian Malaysia was established as a result of the merger between the College of Agriculture, Malaya and the Faculty of Agriculture, University of Malaya. The Library of the College of Agriculture, Malaya thus eventually became known as the Universiti Pertanian Malaysia Library. In 1997, the university was renamed as Universiti Putra Malaysia (UPM) in honor of Tunku Abdul Rahman Putra Al-Haj, Malaysia's first Prime Minister by the Prime Minister, Tun Dr. Mahathir Mohamad, as a strategic gesture to portray the status of UPM as a centre of higher education capable of providing fields of studies, especially in science and information technology, which facilitate national development in the new millennium. In tandem with the development, the Library was also officially changed its name to be known as the Universiti Putra Malaysia Library (Universiti Putra Malaysia, 2014).

And as of 23rd May 2002, the Library was renamed as Perpustakaan Sultan Abdul Samad (PSAS), Universiti Putra Malaysia, after the late great-great-grandfather of the current Sultan of Selangor, Sultan Sharafuddin Idris Shah Ibni Almarhum Sultan Salahuddin Abdul Aziz Shah Alhaj (Perpustakaan Sultan Abdul Samad, 2018). Located approximately 22 kilometres from Malaysia's capital city, Kuala Lumpur, UPM is among the Research Universities (RU) in Malaysia that is deeply committed to the discovery and distribution of knowledge. UPM is also known internationally as one of the most distinguished universities in the region and also for its academic disciplines. UPM presently has more than 26,000 students enrolled in its 71 Bachelor, 7 Diploma and 47 Postgraduate programmes at the Masters and PhD levels both in the Main Campus, Serdang and UPM's Branch Campus, Bintulu Sarawak (Hairul Nizam, 2018).

Since the establishment of the university, the library play its vital roles in providing resources, services, and facilities in supporting the university's learning, teaching, research and consultancy activities among the university community. The library is located strategically in the campus center and it is easily accessed by the students and lecturers. The library building comprises of two (2) blocks with a total floor area of approximately 19,007 square meters and it could accommodate about 2000 users at any one time (Perpustakaan Sultan Abdul Samad, 2018).

The Library has over the years built up its collections in various subject fields, both in print and electronic format. The Library currently holds a collection of 670,000 volumes of books and bound journals, as well as a collection of maps, sound recordings, microforms, video tapes and slides Besides the Main Library, branch libraries are located at the Faculty of Medicine and Health Sciences, Faculty of Veterinary Medicine, Faculty of Engineering and Architecture and the Bintulu Campus Library, Sarawak (Perpustakaan Sultan Abdul Samad, 2018).

Overview Green Library Initiative around the world

The Online Dictionary of Library and Information Science define that green libraries as "a library designed to minimize negative impact on the natural environment and maximize indoor environment quality by means of careful site selection, use of natural construction materials and biodegradable products, conservation of resources such as water, energy, paper, responsible waste, disposal, recycling and others (Reitz., 2004).

Brown (2003) identifies nine green design elements which can be incorporated into libraries such as the community collaborations, daylight, green materials, green roofs, raised floor systems, energy efficiency, natural ventilation, green power and renewable energy and indoor environmental quality. While, Greenmetric UI in year 2015 has six main categories to evaluate green sustainability in the university environment such as Setting and Infrastructure, Energy and Climate Change, Waste, Water, Transportation, Education and Research (Khairul Anuar, 2018).

In this paper, we observed the websites of the five libraries around the world that implement "Green Library Concept" as examples for discussions. The National Library, Singapore implemented their green libraries in the year 2005, then followed by

Minneapolis Central Library in the year 2006, Taipei Public Library's Beitou Branch, Taiwan in the year 2006, Anna Centenary Library, Chennai in the year 2010 and Kasetsart University Eco-Library, Thailand in the year 2012. Through the observations, four main elements on green initiatives were found use in this libraries such as materials and resources, energy efficiency, water conservation and indoor environmental quality.

From an overview, all libraries are purposely design and build with the concept of green libraries (Taipei Public Library's Beitou Branch (TravelkKing, 2019) and National Library, Singapore (Pan, 2012) and some of them used recycled materials for construction (Kasetsart University Eco-Library (KU Eco Library, 2012), Anna Centenary Library (2019), Minneapolis Central Library (Archiseek, 2010 and Clarke, 2019)). For energy efficiency, the deployment of various innovative 'green' features helps to keep the building operating in an energy-efficient way such as using LED and CFL lighting and motion sensors and energy efficient lightings that are switched on only when required after a closure of the library (Brown, 2003).

While on the water conservation, all of this libraries acting various efforts such as used of rainwater for landscaping and toilets. They also used recycled water for landscape irrigation and toilet flushing. In maintaining indoor environmental quality, most of the libraries used natural light to substitute interior lighting, and ventilation to reduce the needs of fans and air-conditioning. The libraries also develop an outdoor reading area to promote reading activities among library users.

METHOD

The case study is written based on the experience of the library staff, who are involved in managing the green library initiative since June 2017 and the report submitted to the Center for Quality Assurance (CQA) for the "Administration Management Star Rating Award 2018". Base on the report, the implementation of the green library initiative was categorized into five main elements and described in the next section.

GREEN LIBRARY INITIATIVE AT UPM LIBRARY AND THE ELEMENTS ASSESS

Universiti Putra Malaysia has embarked on the "Services Quality and Innovation Day" since the year 2013. The purpose of this celebration is to support the country's transformation agenda in realizing innovation and creativity in service delivery (Norliyani, 2013). During this celebration, certain awards were presented to the organization, team, and employees who have significantly contributed in improving the university services and innovation.

In the spirit to participate in the "Administration Management Star Rating Award", the Library 5S Committee was set up in the year 2014. Parts of the role of this committee are to plan and ensure that all the criteria's assess for the award are fulfilled. The committee role is also to help in encouraging the library staff to get involved in the green library initiative such as the "Reduce, Reuse and Recycle" campaign and to develop the green corners in every 5S zone in the Library.

In July 2018, to further enhanced the green initiatives in the Library the Green Sustainability Committee was set up to focus and play more roles in encouraging green initiatives and activities among the library staff. The Library was divided into several 5S zones. This is to ensure that the initiatives were effectively implemented and all staff in the particular zone was given the responsibility to manage the activities that are related to the green initiative.

This year (2018), the Green Sustainability Committee focused on the herbal garden project, utilities saving (water, electricity and paper), UPM sculpture, mural wall painting, and few others. For the purpose of the award assessment, the Green Sustainability Report was submitted to the Corporate Strategy and Communications Office, UPM in August 2018. There were five main criterias in the assessment of the implementation of the green sustainability as shown in Table 1 which include budget, electricity saving, water saving, paper saving and initiative / innovation organized by the participating organization. Certain criteria were adopt from the UI-Greenmetric World University Ranking, the ranking on environmental sustainability. UPM has been listed as the world’s top 17th university in year 2018 by UI-Greenmetric World University Ranking based on its rigorous efforts to promote campus sustainability and effective environmental management (Aris et al, 2018; Hairul Nizam, 2018).

Table 1: Assessment of Green Sustainability

Elements of Green Sustainability	Criteria of Green Sustainability
Budget	Budget allocated for green sustainability initiatives
Electricity Saving	Annual report of the percentage consumption
Water Saving	
Paper Saving	Annual report of the percentage of paper purchase cost
Initiative / Innovation	The total number of Green Sustainability activities organized yearly by the organization

(a) Budget

The allocation of proper budget indicates the seriousness of the organization in their green sustainability initiatives as described in table 1. In the assessment for these criteria, the participating organization is to submit reports on the budget allocated, planning document and purchasing reports. In UPM Library, the management already allocated budget for the indoor flower rental since the year 2016 until early of 2018. Since the reducing of library budget, this rental was terminated. Later, the responsibilities to maintain the indoor flowers were given to the library staff base on where the indoor flowers were located.

The budget previously allocated in maintaining the indoor flowers was later given to the Library Green Sustainability Committee. The budget allocation was partly to set up the

herbal garden in front of the library to beautify the library outdoor environment and also in preparing for the library visit by the delegates from the 84th World Library and Information Congress, Kuala Lumpur held in August 2018. The garden covers varieties of flowers, herbal plants and fruit trees.

(b) Electricity Saving

The university's attention to the use of energy and climate change issues takes the highest weightage in this ranking. With these criteria, the library is expected to increase the effort in energy efficiency on their buildings and should undertake more awareness on nature and energy resources. The evaluation for these criteria was based on the percentage of electricity consumption report and used the previous year report as the base line.

In UPM Library, many initiatives were taken to reduce the electricity consumption which include replacing the conventional light sources to LED (Light Emitting Diode), launching of the energy awareness campaign and used of economic photocopy machine. Replacing the light sources to LED initially is costly. However, it will be more economical over the years. While the campaign increases the awareness among library staff of their responsibility and on the important of energy saving at workplace. The used of the economic photocopy machine help to further enhance the saving on electricity consumption. The photocopy machine will automatically turn on to sleep mode if it is not in use.

(c) Water Saving

The aim of these criteria is to help the university to reduce the water consumption on campus and to increase the awareness on water conservation and protecting the habitat. Water conservation awareness program and piped water use are among the criteria use by Greenmetric UI (Universitas Indonesia, 2015). The evaluation for water saving is similar to the electricity saving which is based on the percentage of water consumption reports and used the previous year reports as the baseline. In UPM Library, among the initiatives taken to reduce the water consumption include repair leaking pipes and launching water conservation awareness campaign among the library staff. Notices to remind staff and users of water saving are placed in the toilets and staff pantry.

(d) Paper Saving

The evaluation for these criteria is based on the percentage of paper purchase costs and used the previous year reports as the base line. In UPM Library, among the initiative taken to reduce paper usage are by using double sided paper and the use of recycled paper for printing purposes. In addition, the library also encourages the use of online form to replace the printed form. For examples, in the 2018 Library Introduction Session for New students the Library has adopted the "Green Concepts" by minimizing the use of printed materials. Library Guides and Class Assessment Forms are no longer in printed version but are uploaded into the library website. As a result, the library managed to

save 94% of paper usage. Furthermore, the use of the online assessment form facilitates students to easily evaluate the classes by using computer or smartphone.

Waste treatment and recycle activities are major factors in creating a sustainable environment in Greenmetric UI (Universitas Indonesia, 2015). Most staff and students activities on campus contribute to lots of waste, therefore programs on waste treatments have been among the concern of the university this include recycle program and policy to reduce the use of paper and plastic on campus. Recycle corners are provided by each 5S zones in the Library. Each 5S zones are free to explore their own creativity in creating this recycle corners and use of recycled materials were encouraged. The Recycle Corners created at all 5S zones commencing January 2017.

(e) Initiative / Innovation

In the year 2012, education criteria have been added to the Greenmetric. These criteria are based on the thought that the university has an important role in creating the new generation concern with sustainability issues (Universitas Indonesia, 2015). The evaluation for these criteria is based on the total number of green sustainability activities that have been organized by the organizations in UPM. In UPM Library, among the initiatives taken were launching of the “Green Library Initiative”, creating recycle corners and green corners at all 5S zones, herbal garden, UPM sculpture, mural wall painting and a few others.

(i) The Launching of the “Green Library Initiative”

The Green Library Initiative in UPM Library was officially launched in June 2017.

A brief on the green sustainability initiative at UPM level was outlined by YBhg Prof Datin Paduka Datuk Vice Chancellor and the library action plan was address to all staff by the Chief Librarian, Encik Amir Hussain Md. Ishak on June 9, 2017

(ii) UPM Sculpture

The Sculpture Project of 'We Love UPM' was completely design and constructed within two months (July and August 2018) by the library staff. The sculptures were made of recycle steel book shelves, boards and wood. There were two (2) sculptures constructed, one inside the Library and the other was constructed right in front of the Library. These sculptures have become the Library new landmark and have attracted visitors to capture their memories during their visit to UPM Library.

(iii) Mural Wall Painting

Mural wall painting was painted on the side wall of the library main staircase to create more beautiful environment and to blend with the herbal garden. This mural wall painting was also painted by a group of library staff and was completed on August 2018. Some of the materials use was contributed by the library staff. The mural wall painting is also becoming one of the attractions among the library visitors to capture their memories while visiting the library.

CONCLUSION

As parts of the university organizations, UPM Library is committed to play its significance roles in supporting the mission of its parent institution to conserve the university environment through various eco-friendly, green activities and quality management systems based on sustainable and efficient environmental management. In order to enhance the knowledge and skill among the library staff, the Library has scheduled courses regarding plant care and compost fertilizer preparation. In return, there are lots of benefits after the implementation of the green initiative such as reduce on budget, energy saving, good staff attitude towards energy consumption and also increase healthy workplace among library staff through teamwork activities. UPM Library has shown green leadership capability among the UPM community which is reflected by winning one of the UPM awards that is the second placing for the “Administration Management Star Rating Award 2018” during UPM Services Quality and Innovation Day. Green sustainability is one of the components that were being evaluated for the purpose of this award.

Presenter Biography

Encik Muzaffar Shah Kassim was appointed as the Chief Librarian of the Universiti Putra Malaysia (UPM) Library in May 2018 and starts his career with UPM since the year 1985. He obtained a Bachelor on Library Sciences from the Institut Teknologi MARA (currently known as Universiti Teknologi MARA) and holds Master in Economics and Social Studies (Library and Information Sciences) from the University of Wales, Aberystwyth. His interest is on managing library building transformation and income generation. Under his leadership, UPM Library actively introduces new library services and facilities to fulfill the current trends of the library users and recently has won second place for “Administration Management Star Rating Award 2018” during UPM Services Quality and Innovation Day.

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