Consumers' roles and practices towards sustainable UKM campus

Azwa Zawana Binti Azlin [1, *], Er A. C. [1], Naquiah Binti Abd Rahman [1], A. S. A. Ferdous Alam [2]

[1]School of Social, Development and Environment, Faculty of Social Sciences and Humanities, National University of Malaysia, Bangi, Selangor, Malaysia
[2]School of International Studies, University Utara Malaysia, Sintok, Kedah, Malaysia

ARTICLE INFO

ABSTRACT

Educating the campus community about issues related to sustainability can create awareness of the effects of each individual action on the environment. Fostering sustainability at the university involves all members of the campus community, including students, staff, administrators, and the public. Individuals can contribute by doing little things in order to maintain the sustainability of the campus. Accordingly, this study will identify the perception of respondents based on their understanding of the concept of a sustainable campus and practices that can be advocated to employees and the community around the campus of National University of Malaysia (UKM) towards preserving the environment for future generations.

1. Introduction

The culture of the principle of sustainability in public higher education institutions and other educational institutes has generally become the latest trend in the implementation of campus sustainability at the global level. According to Norfadillah et al. (2011), many initiatives have been taken at the international and university levels to ensure the absorption of the sustainability concept at each level of people around the world. This is one of the strategies to create awareness in the university community about the importance of protecting the environment and giving exposure and detailed information about the concept of sustainability itself. The sustainability concept propounded at educational institutions not only involves students but it also involves the academics and support staffs in the campus.

Many initiatives and efforts have been carried out that combines the idea of sustainability in the campus system allowing the involvement of people from different professional backgrounds such as engineers, economist, environmentalists, lawyer, etc. (Velazquez, 2005). This is because the impact of human activities on the environment in the campus has brought about the setting up of policies and for the university administration to conduct environment sustainability initiatives to maintain the prosperity of the campus and the surrounding community (Alshuwaikhat and Abubakar, 2008). In relation to environmental efforts, Sharp (2005)

believed that even though environmental sustainability initiatives have been carried out well, most universities have not given much attention to the earth system's condition as if humans do not have a basic dependence on the system.

Consequently, there have been many environmental issues such as increased flash floods and landslides at institutes of higher educations around the world. Therefore, ecological indicators can be a vital tool to detect the changes to the ecosystem as it provides warning signals to the environment around the campus.

Moreover, a university is the best platform to promote sustainability ideas because the university is a place where all new ideas and knowledge are created and practiced. In addition, a university plays a role in promoting sustainable practices and it is recommended that the practices are integrated into the operations of the university to achieve a sustainable campus (Howitt and Rickards, 2013) especially towards the natural ecosystem of the human habitat.

Shriberg (2002) highlighted the main reasons for universities to conduct the sustainability concept at their institutions including:

i. Expertise / skills: Universities should lead the society towards sustainability. Universities have a major responsibility in raising awareness and knowledge, and creating tools and technologies to ensure a sustainable development in the future. Universities also have various specialties for the development of intellectual property in achieving this goal:

ii. Social responsibility: Universities have been proven to occupy a privileged position in society.

* Corresponding Author.
Email Address: eveer@ukm.edu.my

This position should be used wisely to establish a sustainable university;

iii. Model: A university should be the driver in the implementation of the concept of sustainability to increase the capacity of the university community and to become a model for sustainable university;

iv. Pollution Contributors: Students are still weak in implementing sustainable practices in the university due to the lack of knowledge and awareness about sustainability. The university itself contributes towards negative environmental impacts directly or indirectly; and

v. Enhance image: Research has shown that the reputation and image of a university that seeks to implement the concept of sustainability increases. Universities can attract not only the society but also students.

In addition, education at the tertiary level also aims to improve the integration of environment and development in all educational programs, in particular the examination of the source of environmental issues and major development in the local context, based on the best scientific evidence and other appropriate sources of knowledge, and a special emphasis on advanced training for decision making on environmental issues (Mariani, 2008).

2. Methodology

This study is a descriptive cross-sectional research. The questionnaire technique is used to collect data from 100 respondents including academic and support staffs. The questions in the questionnaire are prepared based on the sustainability survey indicators from previous studies. In summarizing the questionnaire, several considerations were measured to obtain more relevant and effective data (Fig. 1).
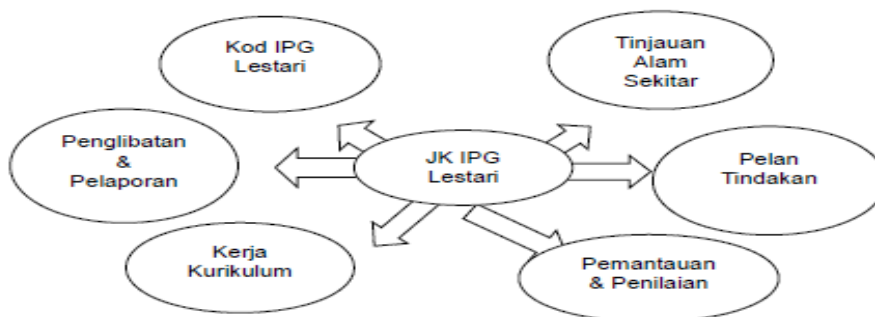

Fig. 1: Methodology of the sustainability plan

3. Results and discussions

Fig. 2: Views of support staff towards sustainability

This study has a reliability value of around 0.83, which shows that the construction of the questions is good and meaningful.
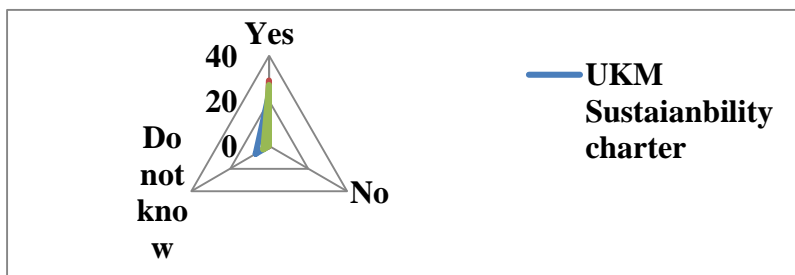
Based on the analyzed data, the academic staffs have a high level of understanding towards sustainability compared to the support staffs as shown in figure 2 and 3. This factor may be caused by the educational level. According to the academic staffs, they may have a more advanced understanding towards sustainability based on their studies and experiences. Dahle and Neumayer (2001) in their research on the level of knowledge and awareness among university staffs and students stated that the misunderstanding of the sustainability concept might hinder the interest towards the preservation of the environment.

Each individual plays a vital role in the effort towards achieving a sustainable university. Each citizen should be involved directly or indirectly in this effort. The implementation of a sustainable operation and integration in colleges or universities' curriculum require complete inter-disciplinary collaboration and community effort (Mc Namara, 2010). In fact, in this study, all the staffs including the support staffs and academics know about the sustainability concept but their knowledge is not

accompanied by the practices of sustainability to strengthen their understanding and participation

effort to improve sustainability practices within the campus community.
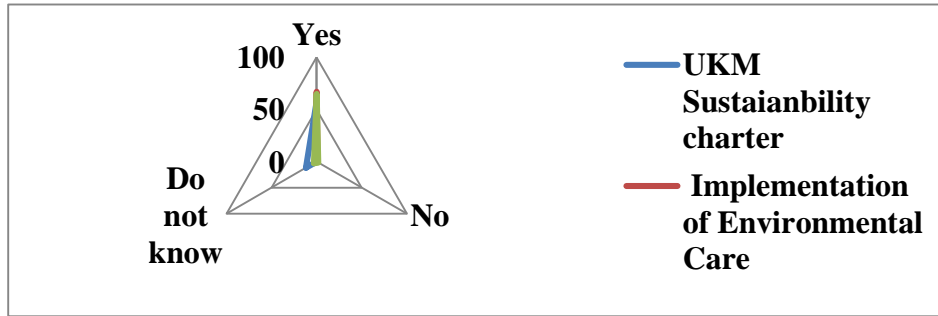

Fig. 3: Views of Academic Staff towards Sustainability

Table 1: Views of support staffs and academic staffs about sustainability

Statement	UKM Sustainability charter		Implementation of Environmental Care		Monitoring and Action	
	Support Staffs	Academic Staff	Support Staffs	Academic Staff	Support Staffs	Academic Staff
Yes	23	58	29	67	27	65
No	0	0	0	1	0	2
Do not Know	7	12	1	2	3	3

The degree of the respondents' agreement towards sustainability shows an average value based on the statement "Whole campus community must have responsibility towards the environment" at around 1.25 with 77 respondents (77.0%) who strongly agree, 21 respondents (21.0%) agree, and 2 respondents (2.0%) are neutral. It shows that the UKM campus community including the academic and support staffs know that they also have a role in maintaining and improving environmental sustainability. However, the average value for the statement "More awareness towards campus sustainability" at around 2.12 with 24 respondents (24.0%) who strongly agree, 46 respondents (46.0%) who agree, 24 respondents (24.0%) who are neutral and 6 respondents (6.0%) who disagree, proves that the respondents know their role in maintaining sustainability but they do not practice it because of less awareness on the impacts of their actions and activities, which can destroy the environment.

Dyball (2010) also studied the challenges of a sustainable university via the perception of staff at a university in Australia. In his study, the awareness, knowledge and understanding related to sustainability among the staff was the main obstacle in the formation of a sustainable campus. The sustainable campus community is the responsible party, which protects and improves the health and wellness of the society and ecosystem at the local and global level. This involves the university community's knowledge to handle the social and ecological challenges in the future. Some examples of university stakeholders are the academic staffs, students, administration staffs, suppliers, visitors, and the society (Cole and Wright, 2003).

Table 3 shows the overall average value of analysis for each indicator of sustainability among

UKM's support and academic staffs. It shows clearly that the highest average value is for the indicator of Recycle (3R) at around 34.11, followed by Energy Saving, which is at 22.23, Water Consumption is 22.7, and Use of Eco-Friendly Products is 20.1. This proves that the respondents practice recycling practices as a step to preserve the environment besides being wise in energy and water consumption, and the usage of eco-friendly products such as zero polystyrene and plastic bottles.

This could be due to the possibility that recycling terms are synonymous with sustainability practices. More activities such as designing of goods using recycling material with the recycling concept should be practiced. Recycling is one of the ways to save the consumption of natural energy resources. For example, using recycled aluminum cans only requires five percent of energy compared to using pure natural aluminum cans, which means that 95% of energy can be saved. This has a large impact on the usage of natural resources.

Mazdi (2011) suggests that sustainability development is vital in ensuring the holistic well-being of a society. In this issue, all areas especially higher educational institutes play a vital role in absorbing sustainable development for the well-being of the campus community. One of the elements in forming a sustainable development in the campus is to encourage the usage of non-motorized vehicles as transportation such as walking as a medium of mobility among the campus community. Consequently, higher educational institutes should focus on a commitment towards planning of footpaths as a policy, as practiced in the campus community of University Pendidikan Sultan Idris (UPSI). Norfadillah et al. (2011) claimed that the staffs and students are one of the most important

communities in UKM in addition to being the

majority of the community in the university.

Table 2: Degree of agreement of respondents towards sustainability

Statement	Degree of Agreement					
	SA	A	N	DA	SDA	Average
The campus community should be responsible for the environment	77	21	2	-	-	1.25
Special Policy	57	40	3	-	-	1.46
Support from all parties	61	33	6	-	-	1.45
More frequent monitoring	36	52	11	1	-	1.77
Strong awareness on campus sustainability	24	46	24	6	-	2.12

Note: DA = Disagree, N = Neutral, A = Agree, SA = Strongly Agree, SDA = Strongly Disagree

Table 3: Overall average value analysis for each sustainability indicator

Indicator	Average value
SUSTAINABLE concept	11.6
Water Consumption	22.7
Forest Preservation	2.35
Energy Saving	22.23
Transportation Facilities	17.38
Use of Eco-Friendly Products	20.10
Recycle (3R)	34.11
Physical Designs of Building	3.91

Source: Field Work

4. Conclusion

More in-depth studies can be undertaken by considering the 12 potential universities as agents of change in helping to highlight the potential mechanisms to continuously increase the capacity of the communities. This would encourage the universities to help increase knowledge and awareness about sustainability at all levels of the university community. Universities can access a variety of sustainability issues previously considered not important, build bridges of communication and understanding of university sustainability among the faculty, staff and students and suggest the best sustainability practices in universities.

Implementation of a sustainable campus needs to be improved and increased to achieve the effectiveness of this concept in accordance with the objectives of the establishment. The current increasing rate of pollution along with a lack of awareness among the campus community urgently needs a more efficient effort that can be applied to all communities for the benefit of the future.

Acknowledgement

References

Alshuwaikhat HM and Abubakar I (2008). An integrated approach to achieving campus sustainability: assessment of the current campus environmental management practices. Journal of Cleaner Production, 16(16): 1777-1785.

Cole L and Wright T (2003). Assessing sustainability on Canadian University campuses: development of a campus sustainability assessment framework. Unpublished master's thesis, Royal Roads University, Victoria, BC.

Dahle M and Neumayer E (2001). Overcoming barriers to campus greening: A survey among higher educational institutions in London, UK. International Journal of Sustainability in Higher Education, 2(2): 139-160.

Dyball M (2010). Sustainability in an Australian university: Staff perceptions. In Proceedings at 6th Asia Pacific interdisciplinary research in accounting (APIRA) 2010 conference: 11-13).

Howitt R and Rickards S (2013). Complete campus engagement via embedding ecological footprinting curriculum. In Proceedings of the 13th international Australasian campuses towards sustainability (ACTS) conference, Sydney, Australia. http://www. acts. asn. au/index. php/2013-conf/conference-proceedings.

Mariani Bt Hambug (2008). Kesedaran Pembangunan Lestari Di Peringkat Tesis Ijazah Sarjana Muda Kejuruteraan Awam Fakulti Kejuruteraan Awam Universiti Teknologi Malaysia.

Mazdi Marzuki (2011). Memperkasa Perancangan Laluan Jalan Kaki Untuk Pembangunan Lestari Kampus: Kajian Di Universiti Pendidikan Sultan Idris Jabatan Geografi and Alam Sekitar Fakulti Sains Kemanusiaan Universiti Pendidikan Sultan Idris mazdi@fsk.upsi.edu.my

McNamara KH (2010). Fostering sustainability in higher education: a mixed-methods study of transformative leadership and change strategies. Environmental Practice, 12(01): 48-58.

Norfadillah D, Halimaton SH and Noraziah A (2011). "Tahap Kelestarian Pelajar Universiti Kebangsaan Malaysia Ke Arah Kampus Lestari (The Level Of Sustainability Among Students Of Universiti Kebangsaan Malaysia Towards Sustainable Campus). Jurnal Personalia Pelajar, Bil 14: 1-10 @ 2011, issn 0128-273

Sharp L (2005). Campus sustainability practitioners: Challenges for a new profession. Harvard Green Campus Initiative.

Shriberg M (2002). Institutional assessment tools for sustainability in higher education: strengths, weaknesses, and implications for practice and theory. International Journal of Sustainability in Higher Education, 3(3): 254-270.

Velazquez L, Munguia N and Sanchez M (2005). Deterring sustainability in higher education institutions: An appraisal of the factors which influence sustainability in higher education institutions. International Journal of Sustainability in Higher Education, 6(4): 383-391.