

## **A Study on Environmental Sustainability Practices among Students and Staff in International Islamic University Malaysia (IIUM)**

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### **Abstract**

This study is conducted to assess awareness and engagement on campus environmental sustainability initiatives among the students and staff of International Islamic University Malaysia (IIUM). In this research, a quantitative method was employed and a total of 100 survey questionnaires were randomly distributed to respondents. Based on the survey, 90.7% of the respondents are aware of the term "sustainability" and are mostly concerned on the energy and water consumption in campus. However, there seems to be a deliberate commitment gap due to given answers by respondents in having insufficient time to engage in environmental sustainability. On the other hand, it is found that IIUM has made some positive impacts with initiatives such as promoting waste recycling practices, efficient use of energy, water and many more in considering ways and means to deal more efficiently with environmental issues. The findings suggested that the university could address sustainability issues through other initiatives as in transportation, sustainable landscaping, and sustainable food. The article concluded by emphasizing the importance of integrating sustainability on campus as well as on the respective curriculum and educating university students to assist in sustainable development across Malaysia.

**Keywords:** *Sustainability, Environment, Campus, Students, Staff*

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### **INTRODUCTION**

The Brundtland Report, also known as Our Common Future (1987) stated the term 'sustainable development' as "meeting the needs of the present without compromising the ability of future generations to meet their needs". The term is often used interchangeably with sustainability which aims to foster ecological, economic, institutional, and socio-cultural stability in our societies. Despite having initiatives to create awareness and fully prepared generation towards sustainable development, little action was taken and implemented (Mohammad Reza, 2016).

Universities are changing their curriculums, academic programs, and community services to emphasize more on sustainable development and to integrate sustainability into campus and everyday activities (Lozano, Llobet & Tideswell, 2013). The achievement of campus sustainability has become especially challenging because actively engaged and co-ordinated stakeholders are needed, especially the campus community itself.

Considering the increasing concerns of climate changes and other environmental issues, this involves a mindset of pursuing knowledge on how to live in an environmentally friendly and responsible way. This includes recycling and reducing the usage of electricity however there are many other ways that individuals can take action and protect the environment.

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Thus, the main reasons why Higher Education Institutions should focus on the study of environmental sustainability practices as Sumiani Yusuf pointed out that there is a need to address environmental challenges and to ensure the university embarks on sustainable campus pathways (Rozana Sani, 2019). It is important to educate the campus community since they are the future leaders as well as universities and other higher institutions are the best places to demonstrate the study of sustainable practices with the support of education research and campus management (Lozano, et al (2015).

Malaysia is participating in international agreements on efforts to support sustainable development (Saadatian, Ilias Salleh, Osman Mohd Tahir, & Kamariah Dola, 2009) and also has incorporated the principles of Agenda 21 (Mohammad Reza, 2016) that was adopted by the United Nations (UN). It is, therefore necessary to define the current sustainability status of the Malaysian Universities and the rubrics of Sustainable Higher Education (SHE) to bring significance by combining the aspects of policy and management process in institutions and communities. Additionally in 2013, The South East Asia Sustainability Network (SEASN) integrates higher education institutions, organizations, NGOs, and industries in the countries of South-East Asia to foster, engaging, and incorporating sustainability into teaching, research, community engagement, and institutional arrangements.

The research objective of this article was to explore the ways higher education and universities develop educational programs and extracurricular activities to enable students and other stakeholders to shape sustainability competencies. The study was conducted on a quantitative research method among students and staff at International Islamic University Malaysia (IIUM).

## **LITERATURE REVIEW**

The Brundtland Report, more properly known as Our Common Future (1987), defines sustainable development as “...meeting the needs of the present without compromising the ability of future generations to meet their needs”. However, the principle of sustainable development in its fundamental normative and ethical nature provides no specific guidelines as to which strategies, plans, or activities must be enforced (Baumgartner, 2016).

Alshuwaikhat & Abubakar (2008) stated that sustainable higher education has become a global concern for university decision-makers because of its impacts on the climate. Barth and Rieckmann (2016) found that universities all over the world have an interest in their curricula on sustainability. This higher education focus represents a "substantial rethink" about what types of skills and qualifications graduates need to play a role in addressing sustainability issues and challenges (Wright, 2002). The first public declaration on-campus sustainability is the Talloires Declaration which was adopted in 1990, based on the Association of University Leaders for a Sustainable Future (ULSF). This statement was signed in Talloires, France at an international conference. With the emergence of the sustainability agenda in international dialogue and policy, HE has become a major focus for change, with societies seeking guidance from the sector (Ryan, Tilbury, Corcoran, Abe & Nomura, 2010, p. 112).

According to Copernicus (1994), universities are encouraged to promote and implement their true commitment to environmental sustainability and sustainable development values and practices within the academic setting. They should also allow the development of academic resources on environmental literacy among academics in teaching staff, students, and the general public at large sustainable consumption patterns and an ecological lifestyle. Accordingly, universities around the world are now becoming more involved in environmental development and sustainable development through education and research, community outreach, and campus operations (Cortese, 2003; Stephens & Graham, 2010). The study also shows that HEIs have taken into account the sustainability of campus operations including energy conservation, recycling,

construction, and renovation based on the principles of green design and have fostered the sustainable transport of students (Alshuwaikhat & Abubakar, 2008)

Research conducted by Saadatian, et.al, (2009) in four public universities in Malaysia, such as Universiti Malaya (UM), Universiti Kebangsaan Malaysia (UKM), Universiti Putra Malaysia (UPM), and Universiti Sains Malaysia (USM) has shown that these universities vary in their implementation but share a deep commitment to their agenda, mission, and sustainability efforts. For example, in the building facades, UM has attempted to conserve energy usage by using reflective colors to minimize heating absorption.

Sunthonkanokpong & Murphy (2019) stated (cited in Ryan et al,2010) that the Asia-Pacific region with "60 percent of the population of the Earth" poses serious challenges to sustainability with respect to pollution, increased sea levels, and social implications of labor migration. Therefore, it is important to integrate sustainability learning opportunities across all fields of higher education so that all stakeholders including students may be better equipped to address sustainability issues from all points of view and take part in activities that have a broad influence on the world's future.

As highlighted above, this study aims to explore International Islamic University Malaysia as a case study to assess specifically on the a) university students and staff awareness, perceptions, and engagements on environmental sustainability, b) satisfaction on IIUM campus operations practices. Furthermore, this study investigates how the awareness and engagements link varies across the level of satisfaction in campus sustainability operations practices.

It is rationale to raise awareness to ensure students and staff in becoming more observant of their campus sustainability efforts however, raising awareness in the context of education usually takes some time for the community to engage and commit, therefore many universities have taken actions on raising awareness in operations due to more visible and potential economic benefits.

## **RESEARCH METHOD**

The study focused on the context of the Gombak campus, IIUM that recognizes sustainability as a universal value and deserves to be investigated as a whole. In terms of assessing questions, this study followed both face to face and online methods of survey. The International Islamic University Malaysia (IIUM) was established on 23 May 1983. It is a public university in Malaysia and is founded upon Islamic principles. IIUM has a total student population of 26,266 (2019) consisting of six other campuses all over Malaysia. The main campus of the University, covering about 700 acres, is located in Gombak, Selangor. In its effort to promote campus sustainability, IIUM actively developing programs and strategies to make it one of the world's leading university institutions that has a significant environmental effect in all aspects of academic universities, research, and sustainability engagement activities. As a result, IIUM has been the country's first university to win an International Green Gown Award for the 2020 Best Sustainable Institution category. While on 19th December 2018, IIUM has been certified as the 505th World Most Sustainable University by the UI Green Metric World University Ranking (2018).

The study employed a quantitative research method. This effective methodology was developed in several stages to ensure its validity and reliability. The survey was randomly distributed to respondents and was carried out between June and July 2020 at International Islamic University Malaysia (IIUM). The questions in this research questionnaires were adopted from the Universtiy Leaders for a Sustainable Future (ULSF) and a program of AASHE (The Association for the Advancement of Sustainability in Higher Education). However, they were modified and extracted to the relevant questions in the view of students and staff and also in the context of IIUM.

The selection of the items to be included in the questionnaire was based on a comprehensive literature review of research topics. The questionnaire assesses the understanding

of students and staff on their university performance on some major campus sustainability initiatives. Therefore, they should be more informed and willing to take part in sustainable campus initiatives. In addition, the staff was considered appropriate as the population of the study area because they constitute a role that is responsible for teaching and disseminating the importance of preserving the environment in the university. This makes the university an example and is worth learning for its graduates.

The targeted respondents are the IIUM campus community involving both students and staff which were randomly selected. With regards to the number of sampling numbers, this research has conducted a random sampling and it is the pilot study. It is done to refine the questionnaire towards conducting the real survey at the specific time frame. A total of 100 questionnaires were randomly distributed across the campus and also through online distribution, but only 75 have completed the survey and returned the completed questionnaires, which contributed to a 75% response rate. The potential explanation for receiving only a third quarter of the surveys was due to a lack of motivation and notices of people in responding to surveys.

A six-page survey questionnaire is divided into three (3) sections. The first section consists of respondents' demographic information and a general understanding of sustainability. These questions were using a combination of dichotomous style and multiple responses using a closed-ended multiple-choice format. Type of questions included age, gender, occupation, department, level of study, campus living, and their means of transportation. The second section, consisting of three items i.e., sustainability awareness, perceptions, and engagements examined general understanding of sustainability among the IIUM Community. The measurement scale items for each factor or variable were as follows: Awareness (5 items), Perceptions (5 items), and Engagements (5 items). This consists of 15 items all together rated on a 5-point Likert scale. Moreover, the questions are based on the AASHE and the ULSF. The third section examined the satisfaction of students and staff on the extent to which campus operations and practices conform to sustainability principles.

Both in sections 2 and 3 questions were designed using a five-point Likert scale (1=strongly disagree to 5=strongly agree) and (1=Not at all satisfied to 5= completely satisfied) to indicate the respondents' level of agreement with each statement. Although it is aware of a very wide variety of sustainable practices, the focus of this questionnaire is on environmental protection and its implementation.

The data for this study were analyzed using statistical software known as SPSS (version 25). SPSS is a statistical analysis software product that can handle large quantities of data and can carry out all analyze covered by the text and many more. The ordinal data were analyzed with descriptive statistics which not only explained the main research variables but also provided further analysis. Frequency distributions have been converted to percentages to provide a consistent way of comparing the groups between them.

## **FINDINGS AND DISCUSSION**

### **Demographic Characteristics of Respondents**

The majority of survey respondents are from KIRKHS (46.7%), 8% are from AIKOL, 13.3% from KAED, 9.3% from KENMS, 4.0% from KICT, 8.0% are from KOE and lastly 10.7% are from KOED (Table 1). The participants are largely students (82.7%), Staffs (13.3%) and 4% are others. Students in this questionnaire were divided into: Undergraduate students (67.1%), followed by Master's students (23.3%), and PhD students (9.6%).

Table 1. Distribution of respondents by Kulliyah in IIUM, Gombak

Kulliyah	Student Population
AIKOL	8.0%
KAED	13.3%
KENMS	9.3%
KICT	4.0%
KIRKHS	46.7%
KOE	8.0%
KOED	10.7%
Total	100

In the table above, it is clearly stated that the main number of respondents (46.7%) constituted from Kulliyah of Islamic Revealed Knowledge and Human Sciences (KIRKHS) since it is the largest faculty in the university. It is then followed by Kulliyah of Architecture and Environmental Design (KAED), a faculty that is related to planning and designing a sustainably built environment comprises of 13.3% from the total number while the least number of respondents were from Kulliyah of Information and Communication Technology (KICT) that consist of only 4.0%. However, since the same survey was administered to different samples from the population at different time points has a potential of lower response rates.

### **Awareness and Engagements about Campus Environmental Sustainability**

This section addressed general questions about environmental sustainability. This is important since it can provide a perspective on the great extent to which students and staffs are likely to be engaged in sustainability initiatives in university by recognizing their awareness, participation, interest and a willingness to contribute to them. Nevertheless, students and staff consistently seemed more inclined to engage in academic, research and professional sustainability opportunities, particularly those including skills-based content.

In this research, 90.7% of the respondents were aware of the term “sustainability”. This could be through several medium available as stated in Table 2. The results in Table 2 showed that a large proportion of the respondents (52.8%) discovered sustainability through Internet. This showed that a great deal of concern about environmental sustainability is available online. This was followed by class lecture (23.6%), Books (9.7%), Seminars/Workshop (8.3%) and reading (5.6%).

Table 2. Learning medium for sustainability

Medium	Number of respondents
Class Lecture	23.6%
Internet	52.8%

Books	9.7%
Seminars/Workshop	8.3%
Others-Reading	5.6%
Total	100%

In terms of the most important campus sustainability initiatives, the results in Table 3 below showed energy use (30.7%) was the most selected number by the respondents since energy consumption became the main issues in the campus operations. Thus people are more aware to save energy in order to reduce costs and climate change. Next, sustainable learning consist of 17.3% which they found it important to raise the next generation into eco-conscious, self-sufficient world citizens who understand the immediacy of environmental responsibility. It is then followed by water (16.0%), waste management (5.3%), transportation (8.0%), Building/Structures (6.7%) and sustainable food (5.3%). However, there are 10.7% who answered I don't know. This will reflect that certain people are still not aware of the campus sustainability initiatives.

Table 3. The most important campus Sustainability Initiatives

Sustainability Initiatives	Number of respondents
Energy use	30.7%
Water	16.0%
Waste management	5.3%
Transportation	8.0%
Building/Structures	6.7%
Sustainable food	5.3%
Sustainable learning	17.3%
I don't know	10.7%
Total	100%

The results in Table 4 showed that a large proportion of the respondents (52.0%) expressed strongly agree on sustainability is an important concept for everyone, irrespective of their position. Indeed, increasing awareness on sustainability may increase students' knowledge on the general understanding of why it is so important to protect the critical environment that we are facing currently, and 38.7% agreed that with campus sustainability initiatives, it has increased their interest to explore environmental sustainability. This response showed that every individual can adopt small and everyday practices to help protect and preserve the natural environment. Over 37.3% have reported that they also agree for students to take required course that is related to

environmental sustainability (Table 4). These results found a general awareness about the importance of SD and about 75 % of respondents thought that environmental sustainability should be the top priority. This requires a commitment from all the university or faculty to integrate sustainability courses into their disciplines. Thus, responding to the research objectives, raising awareness on campus may not only apply through study and research but towards the engagements where people can take quick actions such as recycling on campus. Furthermore, the higher the awareness of sustainable practices among individuals, the higher the possibility of taking positive steps towards behaving more environmentally friendly.

Table 4. Respondent's sustainability awareness about environmental sustainability

Sustainability Awareness	Response				
	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Sustainability is an important concept for everyone, irrespective of their position	-	4%	21.3%	22.7%	52.0%
Students are required to take courses related to the sustainability environment	2.7%	6.7%	37.3%	37.3%	16.0%
Information on sustainability is a preferred topic in a subject	-	9.3%	34.7%	36.0%	20.0%
University has provided many input programs on green and sustainability (eg: environmental outreach like energy conservation or recycling)	-	14.7%	32.0%	29.3%	24.0%
With campus sustainability initiatives, it has increased my interest to explore environmental sustainability	1.3%	10.7%	26.7%	38.7%	22.7%

Most of the survey respondents strongly agree (44.0%) that the sustainability topic should not only focus on definition and practical methods but should also offer innovative and advanced solutions (Table 5). This is often followed by an idea of social change and enhanced quality of life. As such, the role of higher education institutions needs to disseminate knowledge and best practices for the best sustainable results. Remarkably, about (37.3%) strongly agree that it is an individual who is responsible for promoting environmental sustainability while 5.3% disagree with the statement. Thus, it is agreeable that it is everyone's responsibility for sustainability. This may be due to a broad approach to sustainability, considering the public's role in fostering sustainable growth, as well as social and institutional issues in higher education. The university which is committed to sustainability enables students to have better hands-on opportunities and experience in the greening of campus initiatives. Thus, this study found that students and staff who have positive perceptions towards environmental sustainability have a higher engagement in a campus sustainability activity.

Table 5. Respondent's sustainability perception about environmental sustainability

Sustainability Perception	Response				
	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Sustainability is a broad term	-	4.0%	41.3%	25.3%	29.3%
Sustainability in higher education mostly focus on recycling programs, increasing energy efficiency and other campus-oriented activities	-	9.3%	36.0%	36.0%	18.7%
The sustainability topic should not only focus on definition and practical methods but should also offer innovative and advanced solutions	-	2.7%	25.3%	28.0%	44.0%
It is an individual responsibility to create sustainable environment	5.3%	6.7%	24.0%	26.7%	37.3%
I believe that there should be more training and exposure on sustainable concept and methods	-	2.7%	21.3%	28.0%	48.0%

When participants answered about their willingness to participate in activities and sustainable development programs on campus initiatives (Table 6), 41.3% of those respondents responded positively, while the remaining 1.3% stated that they were strongly unwilling. Besides, there is less interest as only 4% of the respondents indicated strongly agree in their engagement to join environmental program conducted by the university, and 42.7% has responded that they neither agree nor disagree to participate in sustainability efforts on campus. This finding is resulted due to the top-down decision-making system, which results in less public participation in community project planning and implementation. In consequence, any effort to promote sustainability of campus should strive to inspire students to engage more actively in issues concerning not only their university but also communities in which they live.

Table 6. Respondent's sustainability engagement about environmental sustainability

Sustainability Engagement	Response				
	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I join every environmental program conducted by university	10.7%	22.7%	42.7%	20.0%	4%



I am an environmentalist	4.0%	13.3%	38.7%	36.0%	8.0%
University should integrate sustainability into all major activities	1.3%	4.0%	30.7%	34.7%	29.3%
I am willing to participate in sustainability activities on campus and other places	1.3%	9.3%	25.3%	41.3%	22.7%
I can pursue my professional practice through the understanding on sustainability	4.0%	6.7%	30.7%	34.7%	24.0%

Approximately 48% of respondents responded to the assessment of the main reasons for their disengagements in environmental sustainability (Table 7). 17.3% of the respondents answered that they have no sufficient time to help the environment, while 14.7% of the respondents responded that they received insufficient awareness of the university on environmental sustainability. 9.3% are not interested in taking care of the environment and, 5.3% have answered that it's too much work to handle. Slightly more respondents were unaware of the importance of environmental protection since some people feel that environmental issues today are too severe to address, so what they did does not matter. While there is a range of university initiatives to engage their environment values, implementation and monitoring are the real determinants of the success of such a policy or strategy. While the university is often integrated with sustainable development but with less motivation, and participation of the students and staff can lead to inefficiency and mismanagement in the implementation of SDGs. It is well perceived that the university could make serious changes in the students and staff population by explicitly raising the profile of campus sustainability issues through appropriate signage, informal learning opportunities, and links to the formal curriculum, awareness, and engagements.

Table 7. Reasons for disengagements in environmental sustainability

What is your main reason for your disengagements in environmental sustainability?	
	Percentage
It's too much work	5.3%
Not interested	9.3%
No sufficient time	17.3%
Insufficient awareness of the university	14.7%
Others	1.3%
<b>Total</b>	<b>48.0</b>

### 4.3. The engagements on sustainability initiatives in IIUM Gombak campus

The level of satisfaction among students and staff in terms of moving towards sustainability in IIUM campus operations and practices (recycling, energy and water conservation, landscaping, and transportation) is listed in Table 8.

Table 8. Satisfaction on IIUM campus operations practices on promoting sustainability awareness and engagement

Satisfaction of IIUM campus operation practices	Response				
	Not at all satisfied	Slightly dissatisfied	Moderately satisfied	Very satisfied	Completely satisfied
Bottled water ban	4.0%	8.0%	18.7%	40.0%	29.3%
Waste minimization and recycling	-	1.3%	22.7%	38.7%	37.3%
Increase area of green spaces	1.3%	2.7%	14.7%	30.7%	50.7%
Reduce printing through on-screen reading (eg: device based)	2.7%	6.7%	20.0%	38.7%	32.0%
Using native and adapted plants, trees and turfs	-	2.7%	20.0%	37.3%	40%
Minimum water use on landscaping	-	4.0%	30.7%	34.7%	30.7%
Enhances optimal use of water on campus	-	2.7%	14.7%	48.0%	34.7%
Intercampus shuttle service (i.e. transporation)	1.3%	2.7%	24.0%	37.3%	34.7%
Promotion of IIUM SDGs to adopt sustainability practices	-	4.0%	25.3%	33.3%	37.3%
Create courses and university programs that focus on sustainability	2.7%	1.3%	32.0%	34.7%	29.3%

As regards the extent to which sustainability focuses on promoting sustainability awareness and engagements, more than three-quarters (75.7%) of respondents acknowledged that "very satisfied" or "completely satisfied" sustainability issues have been integrated into the IIUM campus operations effort. (Table 8). The findings indicate that the undergraduate and postgraduate programs offered at the university should focus more on sustainability by including more sustainability courses in the programs. Thus this would subjectively analyze the current status of environmental education and how it can advance to ensure that our fundamental values are taken into account. To ensure a successful means to introduce sustainability in university education is to enable students to attend elective classes on sustainability, invite guest lecturers for sustainability, promote the ties between the natural sciences and social sciences, and provide education for educators about sustainability (Lozano, et.al, 2015).

Increase area of green spaces got the highest assessment score of 50.7% and still ranks in top spots with 81.4% even after the combinations of "very satisfied" and "completely satisfied". Landscaping with native plants suited to the dry climate is a more natural solution. 37.3% of students have reported that they are very satisfied with the intercampus shuttle service provided by the university since 61.3% walks within the campus. Thus the shuttle bus is very useful for the students who stayed in their hostel. While 18.7% are found riding to university and drive across campus in their vehicle. Therefore, students who stay close to where they attend classes are likely to show sustainable transportation behaviors, that is through walking and/or using the shuttle bus. The key consequences are the need for the university to enhance its operational sustainability results by developing and carrying out measures that can reduce its ecological institutional footprint. It is then followed by waste recycling (38.7%) for "very satisfied", reduce printing (38.7%), and then water conservation practices (48.0%). The campaign can engage the entire campus community towards achieving sustainability goals. It is important for the university level to take larger innovative practices and policies to help preserve the environment.

A study reported by Lozano, et al (2015) in comparison to energy efficiency and waste recycling is among the key issues on campuses in 80% of European HEIs. Despite the fact observed by Wolff, Sjöblom, Hofman-Bergholm & Palmberg (2017) sustainability functions more on theory than in practice in higher education, however, in several universities, they have transformed its campuses into a living lab that allows Research & Development to be integrated, demonstrated and deployed on the basis of sustainable alternatives that fits community needs for better campus environments (Verhoef & Bossert, 2019). The findings found that greater awareness (both educational and operational) will be associated with greater engagement and satisfaction towards on-campus sustainability-related activities in order to promote a long-term environmentally friendly and behave in responsible way.

## **CONCLUSION**

This research examines the awareness, perceptions, and engagements of students and staff in environmental sustainability at the International Islamic University Malaysia. Results have shown that while there is a great deal of concern and awareness among respondents about environmental sustainability, there is generally a lack of enthusiasm and appropriate knowledge about sustainability issues. Besides, it is impossible to achieve sustainable campuses more successfully without the cooperation and participation of any stakeholder such as students, faculty and staff, university administration, funding agencies, and the local community.

Even though the assessment was mostly positive, there are few other areas that the IIUM should take into considerations such as ensuring all IIUM operations to reduce the campus' carbon footprint and its energy consumption. The university could also implement features of a green transportation system by increasing the safety of campus sidewalks, incentivize carpools, and encourage the university community to walk or cycle within the campus. The university should also

build ways to get campus operations and activities closer to sustainability so that students should engage in greening measures such as recycling on its own (Kagawa, 2007).

Besides, several steps to encourage research and development on sustainability issues includes encouraging staff, students, and companies to take part in green campus initiatives in their daily lives through studies and community activities. Not only does this research helps in a cross-cultural comparative study, but it can also affect a real-world university decision making in the country. In Malaysia, most public universities were established before awareness of the declaration of sustainable development. It should be highlighted that the move towards sustainability is always holistic and requires total involvement of all users on campus as this is our responsibility for future generations.

The limitation of this research was since the study only explores the perceptions of students and staff in a single institution, there is also a need for research with a broader reach of sustainability initiatives and best practices in other Malaysian Universities, such as economic health and wellbeing. More studies are required to study the role played by faculty in support of campus sustainability in Malaysia. Finally, increasing the number of respondents in each assessment could improve the generalizability of the results.

Further recommendations include the Ministry of Education should assign university management, with trained staff and budgetary provisions to devote itself to sustainability by incorporating sustainability into the policies and strategies of the HEI. In conjunction with other stakeholders, the sustainability offices should undertake campus sustainable assessments to assess the degree to which the university is shifting to sustainability in terms of campus environmental management, facilities and transportation, campus operations, service, energy, and resource use, and waste management. This will examine the strengths, weaknesses, opportunities, and threats that exist to enhance the institution's sustainability.

Further researchers could explore other universities in Malaysia as laboratories to educate students about environmental sustainability and inform the entire society about the importance of sustainable development and its contribution to sustainability. It should, therefore, create more training and prepare young people as future decision-makers in the country to think critically and act sustainably to build and grow sustainable cities.

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