

# **PUBLIC AWARENESS AND UNDERSTANDING ON SUSTAINABLE DEVELOPMENT IN CREATING SUSTAINABLE CAMPUS**

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## **ABSTRACT**

*Universities are the most appropriate place to promote change through innovative ideas, activities and researches. However, in terms of facilitating sustainable development, much need to be done as it has not been the upmost priority. This paper explores the campus community awareness and understanding on sustainable development using questionnaire survey and interviews. Findings revealed that majority of campus community understand and support the need for creating sustainable campus although they have not fully embraced the meaning of sustainable development. Results also indicate facilitating and hindering factors for sustainable development awareness. It is acknowledged that the public awareness and understanding of sustainable development and empowerment will produce the kind of strong foundation to create a successful sustainable campus. This study provides suggestions on creating better awareness and understanding on sustainable development.*

**Keywords:** Sustainable Campus, Sustainable Development, Public Perception

## **1. INTRODUCTION**

The word sustainable development has become increasingly popular in Malaysian strategic development ever since the Seventh Malaysian Plan (1990-1995) was launched but has not been adequately addressed by Malaysian universities. The transition towards sustainable campus must begin with good level of understanding and awareness from the ground level. This paper explores campus community awareness and understanding on sustainable development using questionnaire survey and interviews. Questionnaire survey and interviews were conducted in one of the universities to gauge public level of understanding and awareness.

The paper aims to discuss the following questions:

- What are the campus community current awareness and understandings on sustainable development?
- What are their aspirations towards sustainable campus?

This paper begins with review on Malaysian government efforts on sustainable development. It discusses sustainable campus initiatives in different countries and some efforts made by some universities in Malaysia. This follows with discussion on methodology and analysis on findings. This paper concludes with suggestions on how to facilitate better awareness and understanding on sustainable development in the transition to create strong support for sustainable campus. In general, there is a good level of awareness on sustainable development but the level of understanding needs to be further enhanced.

## 2. SUSTAINABLE DEVELOPMENT IN MALAYSIA

The term sustainable development has become globally favorable and increasingly prominent today, especially in government's policies and decision making. It is a key concept for current sustainable effort that aims to determine the ability of the current generation to use resources and live without compromising the ability of future generation to enjoy the same luxury. Although it is always being debated that the real meaning of sustainable development is subjected to where, who and when it is being translated, everybody agrees on the need to balance the three dimensions of sustainability, which are, economy, social and environmental sustainability. In brief, sustainability encompasses all aspects; social, environment, economy, information strategy, politics and decision making that involves all levels in the community. While some of the strategies have been widely adopted in many public and private agencies, creating a sustainable campus has not received the same treatment since it was thought as a different element from local authority jurisdiction.

Studies have shown that engaging the public is important prerequisite for achieving sustainable development (White and Lee, 2007; George and Kirkpatrick, 2006). Since the Earth Summit 1992, public participation has been stressed as a way to reduce environmental degradation through public empowerment and to give them their rights to take part in the decision making process that affects their lives. Malaysia, as one member of the summit, has carried out continuous efforts to increase the rate of success towards sustainable development. The fact that sustainable development retains its chapter in the Malaysian Five Year Development Plan is reassuring. Part of the strategy to achieve sustainable development is through implementing Local Agenda 21 which emphasizes on people's involvement in creating good place for them to live in. In case of public participation in Malaysia, much need to be done to really gain quality participation (Kamariah and Dolbani, 2006).

The Talloires Declaration (2005) which recognizes the evolving roles of universities in society, states that *"higher education must extend itself for the good of society to embrace communities near and far"*. While acting in such a manner, higher education institutions will also be able to better promote their core missions of teaching and research. This Declaration emphasizes public responsibility and the fostering of partnerships between universities

and communities; it also stresses the importance of the creation of institutional frameworks for the encouragement of good practices in social service.

In line with the Malaysian National Higher Education Strategic Planning towards the Year 2020, in which Malaysia is to become an international hub for excellent international higher education, radical transformation in terms of education revolution for sustainable higher education beyond 2020 (<http://www.mohe.gov.my>) is much needed. In other words, the higher education is seen not only as a place to produce quality and skilled human resource but also for human and knowledge development and progress which is in line with the concept of sustainable campus.

### 2.1 Change in Higher Education for Sustainable Campus

Higher Educational Institutions and their wide range of responsibilities are rapidly growing in importance in globalized, knowledge-based societies. Government is increasingly realizing the short and long-term benefits of education which in practice translates to increase in the quality of labour supply and better citizens in most developed and developing countries. Leaders in higher education institutions also find themselves amidst fierce competitions in many different ways: they are increasingly being challenged to attract students and high quality staff, are facing difficulties to obtain the essential financial resources to fulfill their institution's short-term educational and research mandates and at the same time continue to work to ensure the long term sustainability of their institutions. Current competition for global market requires substantial changes to both their strategies and operations in order to attract international students and excellent faculty members.

The vision and mission of Ministry of Higher Education of Malaysia clearly spell out the need for new breed of human capital to face challenges of globalization in order to sustain the nation's progress. Heavy financial supports have been channeled to universities for research and development purposes. Universities are 'knowledge hubs' with influence at the policy and community levels. It is the universities that play the intermediate role between the nation and the public. Higher education and other technical professionals are strategically positioned between policy makers and community. With access to both, they are potential mediators for the transformation of society's infrastructure (Larson, 2007).

Based on the local and global need for change, higher education institutions need to strategize their short and long-term planning. Successful endeavor to a sustainable campus involves four aspects of the university's community – the administration, academic departments (students and faculty), the university research effort and the local community (<http://sustainablecampus.org/universities.html>). Administration can be in the form of making decision on new building design, building operations and maintenance, landscaping, recycling, waste management, energy management, food service and residential operations. Educational side includes curriculum relating to sustainable development and how to integrate knowledge base with local requirements and applications. The research should play significant role on near and long-term impacts especially on environmental issues. Active linkages and assistance from local community show universities could provide more other than producing skilled human resources. Integrating these four key components can help in achieving the goal to create sustainable campus.

## 2.2 Sustainable Campus

Sustainable campus, according to Contreras et al., (2002) is *“a higher educational institution, as a whole or as a part, that addresses, involves and promotes, on a regional or a global level, the minimization of negative environmental, economic, societal and health effects generated in the use of their resources in order to fulfill its functions of teaching, research, outreach and partnership, and stewardship in ways to help society makes the transition to sustainable lifestyles”* (Contreras et al., 2002:812). Universities or higher institutions are simply the most appropriate place to breed future leaders and to promote new ideas through research and innovation and exemplary activities for sustainable development.

It was reported by Venetoulis (2001) that initiatives for green campus have started since 1960s. However, this term is limited only to some groups and not comprehensive. Nevertheless it is seen as incomprehensive since it only covers the physical aspects and greening of the campus. Sustainability in higher education was first introduced by the UN International Environmental Education Programme (1975–1995). It was noted by Tilbury (2004) that Education for Sustainable Development (ESD) has gained widespread support from university leaders. Moore (2005: 326) asserts that: *‘given what academics know about the current ecological condition of the planet, there is an obligation for universities to become leaders in the movement to prevent global ecological*

*collapse’*. Subsequently, the UN is now encouraging all countries to address Education for Sustainable Development by making 2005 to 2014 the Decade for ESD. To spread sustainable development concept through education, the goal is to integrate the principles, values, and practices of sustainable development into all aspects of education and learning. This educational effort will encourage changes in behaviour that will create a more sustainable future in terms of environmental integrity, economic viability, and a just society for present and future generations. Higher education has given ample proof of its viability over the centuries and of its ability to change and to induce change and progress in society. According to United Nation, *“Owing to the scope and pace of change, society has become increasingly knowledge-based so that higher learning and research now act as essential components of cultural, socio-economic and environmentally sustainable development of individuals, communities, nations and global. Higher education itself is confronted therefore with formidable challenges and must proceed to the most radical change and renewal it has ever been required to undertake, so that our society, which is currently undergoing a profound crisis of values, can transcend mere economic considerations and incorporate deeper dimensions of morality and spirituality.”* (<http://sustainablecampus.org/universities.html>).

The process of shaping society to accept sustainable values is not simple and easy as planned. In Malaysia, it can be said that education has not clearly shown priority in the direction for sustainable development. This includes strategies for teaching and learning about sustainable development from the very basic level up to the higher education level. Although the concept of sustainable development has been embraced by many nations, it has not been given priority in higher education institutions in Malaysia. This phenomenon is not inclusive to Malaysia alone as described by Lozano (2006), *“regretfully, on a worldwide basis, a large percentage of university leaders and faculty members are unaware of sustainable development and its principles or if they are aware of them, they have done little or nothing to incorporate them into their courses, curricula, research and outreach”* (Lozano, 2006: 787). Nagy and Robb (2008) comment that *“there appears to be resignation, for the most part, that the role of university is not what it once was”* (Nagy and Robb, 2008: 1414) when they touched on the issue of universities losing their importance in spearheading the nations' growth and direction. History has revealed that university was once a center of excellence, a center for civilization and the place where the process of upgrading of a society began. The environmental stewardship programmes have been launched in North



American universities since 1980s (for example, visit <http://www.sustainablecampus.org/universities.html>). However, the progress towards adopting sustainability programs has not been initiated or materialized until the end of 1990s by some Malaysian universities.

To spearhead the move, Lozano (2006) suggests that the move to create sustainable campus should be done incrementally in universities to avoid resistance and unnecessary conflicts. Hansen and Lehmann (2006) suggest that universities should play their role as development hubs such as strengthening research, new study curricula, human resource development and linkages with external partners in public and private establishments. Cotton et al (2007) caution that issues that have constrained the introduction of sustainable development in higher education include ongoing confusion over terminology and controversy over whether sustainable development is a valid part of the curriculum.

While many previous works (Cotton et al., 2007; Hansen and Lehmann, 2006; Lozano, 2006) focus on the need to tailor curriculum to integrate sustainability agenda, it is also important that universities provide appropriate physical environment to facilitate the move for sustainable campus. An academic institution committed to sustainability should not only help students understand the roots of environmental degradation and modeling environmentally sustainable practices in subjects offered, but also show their commitment to public in their management and physical structures.

### 2.3 Community Awareness and Understanding

Throughout history, higher education institutions have been actively working with local and regional communities, contributing to the intellectual, social and economic development of their regional populations. This unique relationship needs both parties to share common goals. In transforming campus to become sustainable campus, community awareness and understanding are particularly important for strong support. Figuring out creative approaches to move people to embrace the concept of sustainability requires us to move beyond our disciplinary upbringings. Social-ecological models suggest there are variety of contexts— individual, interpersonal, organizational and community that operate at multiple levels to influence individual action. In addition to intra-individual factors, ecological models say that human behavior

is shaped by higher level factors including policy, organizational, social and physical environments, as well as dynamic interactions across multiple domains. It is stressed here that community understanding on sustainable development could change behavior and enhance their level of participation in activities related to their area. This is closely related to their way of living which could facilitate sustainable development.

However, whether a community has successfully attained sustainability or not is not easily measured. As in the words of Blackburn (2007: 20), “*unfortunately, it is difficult to tell when sustainability is achieved...it's much easier to tell when organizations and societies fail the sustainability challenge, when they cease to exist because of shortcomings in managing economic or natural resources or because of their lack of respect for people or other living things*”.

It is suggested in this paper, public participation and awareness on sustainable development could be considered as one important method to facilitate sustainable campus. The persistency and resiliency of community efforts to make their own space more sustainable is imperative, considering the dilemma faced by development efforts in order to enhance performance without compromising economic, social and environmental benefits.

### 3. METHODOLOGY

The study was conducted in one of the Malaysian public universities in 2008. The aim was to gauge the level of sustainable development awareness among public, especially those living and associating with the university. Interview, observation, document analysis and questionnaire survey were conducted. 240 respondents were involved in the questionnaire survey. While the research is based on one institution, it is conceived as an ‘instrumental’ case study (Stake, 1995) that it provides insights that can be interpreted and adapted to inform developments in sustainable activities beyond this particular university. The case study approach offers a strong grounding in reality, utility to practitioners, and high resolution data that enable cross-disciplinary and synoptic analysis of campus community’s understandings of and attitudes towards sustainable development. However, a potential drawback is the limited generalizability of the case study, particularly in relation to attitudes within campus community in different public higher learning institutions. Although statistical

generalization of this sort is never intended, the research seeks to provide insights into the wider lessons for creating sustainable campus through 'theoretical inference' (Hammersley, 1998), wherein conclusions move beyond the particular to a more general, theoretical-conceptual level. Data are therefore used to theorize about the general possibilities and problems of incorporating sustainable development into higher education. Any theoretical understanding thus produced should, however, be considered provisional and would benefit from further investigation.

#### **4. SUSTAINABLE CAMPUS AND PUBLIC UNDERSTANDING AND AWARENESS ON SUSTAINABLE DEVELOPMENT**

Sustainable development stresses for collective action that is closely identified with democratic community. There are currently three major groups identified as the key actors for successful collaboration in policy or decision making. These are the government (politicians, local authority and government departments), those with special interest in government projects (developers and private sectors) and the community (the public including NGOs) (Kamariah and Dolbani, 2006). One should look into communities, NGOs, political parties and how these different groups could reach consensus. Sustainability in campus depends on the extent to which campus communities and other groups in civil society work and benefit each other. This could be done by building ties and sharing the same agenda with people, industries and agencies. Gross (2007) stressed that participation and decision making from all levels could lead to significant financial savings, converting traditional agency to sustainable design and practices and expanding lists of partners and collaborators to join the team.

In the context of this research, each type of actors – the campus community (academics, supporting staff and students) – has a complementary contribution to strive for sustainability. The capacity of each depends on the internal coherence as well as aggregated experience and ability of its individual members, but the power of each to affect change also depends on its relations to others. The key is nurturing these networks and alliances that are particularly oriented towards pursuing sustainability. In short, sustainable campus is where everybody shares the same vision and strives towards it where achievements in social, economic and physical development are made to last, and could spread beyond the campus sphere.

#### **4.1 PUBLIC PERCEPTION ON SUSTAINABLE CAMPUS**

What are the contributions of higher education towards sustainable development? As explained in the earlier section, higher education could be a good foundation for nurturing younger generation to embrace the concept of sustainable development before they embark on the job market. Why is it important to have good understanding and awareness on sustainable development? Most sustainable development experts agree that the process should start from the ground if it is to gain momentum. Embracing the concept should start from gaining good understanding. This paper focuses on public understanding on sustainable development to develop strong framework for the drive.

Findings from questionnaire survey revealed that majority of respondents had little or good understanding on the concept of sustainable development. Table 1 below shows that 17 percent admitted that they had good understanding and a good 48 percent revealed that they had moderate understanding. About 34 percent mentioned that they had no understanding or had never heard of the term before. 5% of respondents admitted that they learnt about it from lectures and assignments. On the other hand, the highest source of information is 25.2% from written media (internet, newspapers, magazines, books), and 23.1% from visual media (television, movies). Please refer to Table 2.

This implies that more can be done in the curricula and activities in campus. Interviews with selected respondents showed that all groups - community, staff and students - agreed that the campus has already reflected elements of sustainable campus but they suggest that efforts towards sustainable development can be enhanced and continuously strengthened to yield significant results. Some responses on what they believe as the campus reflection on sustainable development include the campus effort to maintain green surrounding, installing recycling bins, conducting new researches in agriculture, catering for students' co-curriculum activities that involve charity works, and providing better and efficient public transportation. Interviewees also revealed that they have different perceptions about sustainable development but generally the majority share the same view of wanting good balance in social, economic and environmental benefits in all campus activities and strategies. Document analysis from the campus website including faculties' websites illustrates substantial percentage of courses offered reflect the sustainable development concept. Further interviews with lecturers also

Table 1: Understanding on the Concept of Sustainable Development

Which of these statements best describes your understanding Of the concept of sustainable development?	Frequency	Percent	Valid percent
I have a good understanding of this concept	40	16.7	17.1
I have a moderate understanding of this concept	115	47.9	49.1
I have no understanding of this concept	46	19.2	19.7
This is the first time I have ever heard about sustainability	33	13.8	14.1
Total	234	97.5	100
Missing System	6	2.5	
Total	240	100	

Table 2: Source of Information about Sustainable Development

In what way (s) are you usually exposed to or made aware of ecologic, economic, and social sustainability issues. (choose one)	Frequency	Percent	Valid percent
Discussions with family, friends and lecturers	44	18.3	18.5
Written media (internet, newspaper, magazine, etc)	60	25.0	25.2
Visual media( movies, televisions, etc)	55	22.9	23.1
Music/ Musical lyrics	5	2.1	2.1
Lessons/ assignments at school/ university	12	5.0	5.0
Seminars/ conference	7	2.9	2.9
Other (please specify)	1	.4	.4
These issues are new to me	6	2.5	2.5
Total	238	99.2	100
Missing System	2	.8	
Total	240	100	



confirmed that some courses did integrate new innovative techniques to support sustainable development or related to the concept. The campus joint effort in activities and research with outside communities and companies show good cooperation towards community development. This implies that the campus community is aware of sustainable development and their role in serving the community at large as well as what is needed for sustainable future.

Suggestions from respondents on how to improve the campus effort to be sustainable campus include the following: inventing a new design for recycling bins, advocating more activities and programs with community, using biodegradable products, conducting awareness programs, greening the campus by taking in green buildings and materials, posters, encourage walking and cycling by providing facilities, and good support from top management.

Sibbel (2009) stresses that contribution from higher education towards achieving sustainable development requires awareness of social and moral responsibilities associated with professional practices, involving staff to lead students towards global sustainability. Psychological research indicates that several factors influence behavior including attitude, inconvenience, personal factors, contextual support, social norms, action difficulty and habitual behavior (Arbuthnott, 2009). This implies that the education for sustainable development should be enhanced using variety of modes to gain wider understanding for attitude and behavior change. To change attitudes and behavior towards sustainable development, more effort is needed to educate people, perhaps from kindergarten, to really understand why they need to support sustainable development. This means that the process of change may take time but could be facilitated with good supportive environment.

## 5. CONCLUSION

This paper discusses public understanding on sustainable development. While the creation of sustainable campus has gained firm ground in many countries, Malaysia is gradually and slowly following suit. This paper reveals that campus community has been increasingly aware of sustainable development in their role to create sustainable future. Universities or higher education form a strong ground to breed future professionals. Future professionals and top management are in the position of making decision, managing resources and designing

options to facilitate the process. Increasing awareness and understanding on sustainable development requires education so that people can go beyond attitude change, to act in ways consistent with their values, and especially for university, graduates when they go out serving the community. To actualize this interdisciplinary collaboration, raising awareness of social and moral responsibilities associated with professional practice need to be inculcated in our graduates before they embark on working life. It is acknowledged from the study that the main barrier to overcome in order to be a sustainable campus is the lack of knowledge and understanding on sustainable development among campus community and lack of supportive environment. Without strong awareness on sustainable development, it is difficult to head for changes at the individual level. Public awareness and understanding of sustainable development and empowerment will, in itself, produce the kind of strong foundation to create a successful sustainable campus. There need to be incentive structure and proper framework to encourage attitude and behavior that support sustainable development at the campus level before it can be spread outward. Planning and strategizing for sustainable campus should also consider measures on increasing population, changes in socio-political environment and changes in technology. Such measures could be in the form of education, increasing public involvement in decision making and giving empowerment to manage the place. A sustainable campus is an academic center where achievements in social, economic and physical development are made to last. This in turn will ensure continuous empowerment to its inhabitants and surrounding community to initiate and to lead for sustainable development.

## 6. ACKNOWLEDGEMENT

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