

THE CHALLENGES AND EXPECTATIONS ON HIGHER EDUCATION INSTITUTIONS (HEI'S) IN SOUTHEAST ASIA TOWARDS BUILDING ENVIRONMENTALLY SUSTAINABLE SOCIETY

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From the landscape of 4.5 million square kilometers of skyscrapers in Singapore, to some of the world's oldest tropical rainforests, Southeast Asia is one of the most divergent and vibrant cultures on the planet. The constant GDP growth rate at around 5 on average in past few decades [1] has changed the landscape and living standards of the people in this region rapidly at the cost of some adversarial effects on the environment from time to time. Now, the awareness of building a sustainable society is on the cards around the globe, and every nation in this region is gearing up towards making a sustainable society in the new millennium. There are many challenges and uphill tasks like political stability, lack of awareness among various clusters of the society causing roadblocks and challenges in achieving this goal of building a sustainable society. Compared to other Industries, social developments and environmental responsibilities were pioneered by the education sector in the history of this region. It is time for the Academic Institutions to play an active role once again towards this essential paradigm shift. This research is a detailed study conducted in five higher education institutions in the region with diverse background and location through questionnaires and study on the current practices, challenges faced, and proposes their views on various strategies in achieving the sustainable society. The results of the survey reflect James Gustave Speth's famous article in 1991 'The Transition to a Sustainable Society', which stated that the sustainable society can only be built when the society does not move away from its cultural roots[2].

Keywords: Environment Sustainability and Society Responsibility of HEI.

1.0. Introduction

The World Commission on Environment and Development was asked to formulate the roadmap before Millennium with a message "a global agenda for change". The main task for the commission was to propose long-term environmental strategies for achieving sustainable development and to foster greater co-operation among countries at different stages of economic and social development [3]. Sustainability is still a debate and with many definitions among experts has a broader scope of just more than being Green. Sustainable organizations should have solid long term sustainable priorities embedded in their framework to solve global challenges [4] [5]. We live in an era in the history of nations when there is greater need than ever for coordinated political action and responsibility [6]. Southeast Asia is no different. The developed nation Singapore and Borneo, the second ancient rainforest

on the globe, co-exist in one of the most divergent cultures in the world. There is a natural inclination towards respecting the ecology in the natives of this region [7] [8]. However, there are many challenges such as illegal mining, deforestation, urbanization, air pollution, disturbed ecological cycle and migration to cities that are still on the top priorities just like anywhere on the planet in the recent times[9]. There have been significant efforts by the Governments, NGO's and the individuals to insist and embark on the importance of sustainability and to build the sustainable future in the recent past, but still, there is lot more to be done[10]. In a nutshell, the journey has just begun even if it is towards the right direction. Environmental sustainability and the society's responsibility towards maintaining it will be more effective and permanent when it is orientated from the roots of their culture which eventually needs to be built through the basics of education [11] [12]. The culture that grows within the campus spreads out

and remains intact for the next generations when it is dealt well [13]. So, the aim of this research is to find out the current practices and understandings and the changes that are required and can be brought in together during short and long term periods. If the sustainability challenges are met by inculcating the indigenous habits to the forefront, it is envisaged that the change is more natural and permanent [14].

Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs [15] [23]. The concept of sustainability deals with a tremendous challenge for education due to its vast definition addressing how humans can live on the planet in a manner by protecting cultural and biological diversity, recognizing and ecological limits, and learning all the systems that are interrelated. To achieve this, the educational institutions need to rethink their strategies, re-structure their courses, adopt innovative teaching and learning methods, setting research priorities, and integrating community and campus operations [16] [17] [18]. With this, students and the stakeholders will be evolved as more adept decision makers to face the challenges of increasingly complex, dynamic, and uncertain future that we all are facing. Sustainability needs to be achieved by addressing issues related to social justice in the society. An academic institution committed to sustainability needs to understand the roots of those injustices and should be able to integrate with the proposals with a deep understanding of the roots of environmental degradation and modeling environmentally sustainable practices [19]. Education for sustainable development is not a destination and is a journey, a dynamic concept that puts stakeholders' awareness, education and training to create or enhance an understanding of the issues of sustainable development and to develop the knowledge, skills, perspectives and values which will empower people of all ages to assume responsibility for creating and enjoying a sustainable future [20] [21].

Modern day Higher Education Institutions (HEI's) are densely populated communities with students, academic and supporting staff and researchers residing in and around campus in a close knit area. The challenges that are faced by modern HEIs are the same as modern society, and any positive impact

exerted here is easy to be replicated into the society in a natural way.

This research conducts a survey from different members of the educational institutions to understand the awareness of sustainability and their commitment towards establishing this objective, summarizes their feedback, and suggests few of the methods that are worth considering for building the sustainable society. The future research is open for other dimensions and parameters to ensure that these changes are permanent and being maintained. The remaining part of the paper is organized as follows. In section 2, the methodology and survey process are explained. In section 3, the results of comparisons are discussed along with the summary graphs and visuals. Finally, our work of this paper is summarized in the last section along with the scope for the future research.

2.0. Methodology

2.1. Setting the back ground:

Various academic institutions in the region have been selected to understand their inclination towards sustainability. These institutions are from different countries and different geographic locations to reflect developed and developing societies. The first operation is to find the awareness in the community towards sustainability and record their views, studying their suggestions for improvement.

2.2. Survey Objectives:

The Sustainability Awareness Assessment in Campus (SAAC) for higher education Institutions in Southeast Asia is aimed at understanding the awareness of sustainability in the community, identifying the participants extent of involvement, suggesting for improvement, and posting the results for the practical implementation wherever they are relevant eventually to assist in assessing the extent to which the community is sustainable in its input, process and output aspects of teaching to the employability and beyond. "Sustainability" is always a journey and not a destination which is and to remain as the responsibility of present generation for future generations [22]. It is interesting to see how this message is conveyed to everyone in the HEIs as per

their operation, location, environment and limitations.

2.3. Stakeholders:

The survey of the study involved the following stakeholders in the HEIs.

1. Academic (Teaching) staff.
2. Support Staff.
3. Students.
4. Suppliers/External liaison with the community
5. Graduates.
6. Employers.
7. Regulatory Authorities.

All the above stakeholders have participated and expressed their opinions on input, process and output in the past, present and future in relation to their area of involvement. For example employers are advised to map output in terms of quality of the graduates.

The Questionnaire contains various questions with the marks distributed as: 0 (don't know) 1 (no comment) 2 (to some extent) 3 (fairly aware of) 4 (excellent knowledge)

2.4. Participants:

There are 5 Institutions participated in the Survey from 5 different countries of ASEAN: Malaysia, Indonesia, Brunei, Thailand and Singapore.

The following Institutions participated in the Survey
HEI 1:

Infomars Training and Technology Solutions Sdn. Bhd. Unit 22, 1st Floor, Jaya Setia Square, Jalan Berakas BB2713, Brunei Darussalam.

HEI 2:

Polytechnic Engineering Indorama, KembangKuning, Jatiluhur, Purwakarta Regency, West Java, Indonesia.

HEI 3:

Linton University College, BUT Legenda, Batu 12, Jalan UTL, Persiaran UTL, Mantin, Negeri Sembilan, Malaysia.

HEI 4:

Dimensions International College, 58, Lowland Road (Kovan MRT) Singapore 547453.

HEI 5:

Sahakomprachanukool School, Amphoe Pathiu, Chumphon, Thailand

2.5. Process:

All the participants were distributed the Questionnaire. The samples were selected to ensure that represent the diversity of class, race, gender and geographic area.

The input describes the idea of community's understanding on the input processes such as curriculum, student recruitment and participation. This Process deals with the learning and teaching methods and interactions among the communities within and outside the campus. Whereas the output portrays the results of the processed input, the suggestions speak about the improvements that are required. The key factors in the 4th table below speak about the sustainability's success which is based on the natural indigenous culture that could help to build the sustainable society in a natural way. Each category has 5 Questions. All marks obtained in total are calculated against the number of participants for the percentage for the respective criterion.

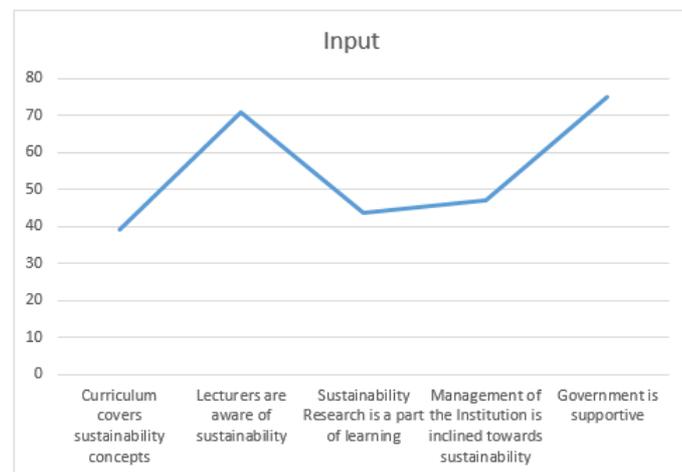
3.0. Results & Discussions:

From the 5 different institutions in different countries, it is evident that, there is a lot to be done in terms of sustainability in the current input, process and output systems.

Input

Descriptions	Curriculum covers sustainability concepts	Lecturers are aware of sustainability	Sustainability Research is a part of learning	Management of the Institution is inclined towards sustainability	Government is supportive	Average
HEI 1	31	82	31	52	93	57.8
HEI 2	37	61	39	36	41	42.8
HEI 3	42	74	42	41	91	58
HEI 4	52	71	61	62	96	68.4
HEI 5	33	66	46	45	54	48.8
Average	39	70.8	43.8	47.2	75	

Table: 1

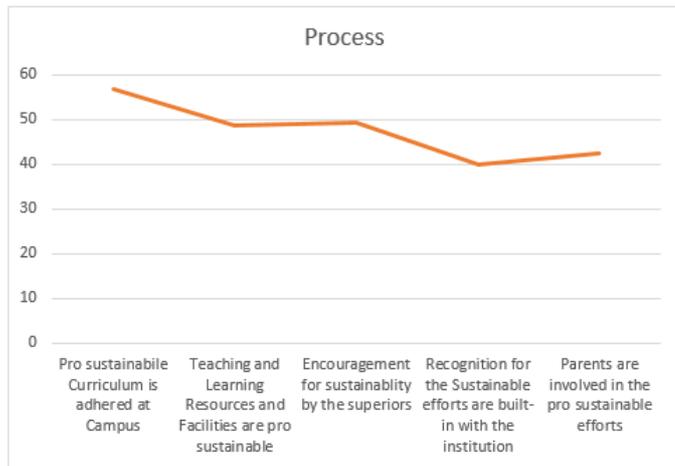


Graph: 1

From the table 1 the participants believe that the input is still far away from good where the curriculum is not close to the requirements of building sustainable future. The averages from HEI1 and HEI2 are below 50 and the remaining also just above 50 which is not encouraging. The graph 1 depicts the same.

Process						
Descriptions	Pro sustainable Curriculum is adhered at Campus	Teaching and Learning Resources and Facilities are pro	Encouragement for sustainability by the superiors	Recognition for the Sustainable efforts are built-in with	Parents are involved in the pro sustainable efforts	Average
HEI 1	61	52	46	39	45	48.6
HEI 2	57	44	39	24	39	40.6
HEI 3	43	52	53	37	44	45.8
HEI 4	71	61	67	62	51	62.4
HEI 5	52	34	42	38	34	40
Average	56.8	48.6	49.4	40	42.6	

Table: 2

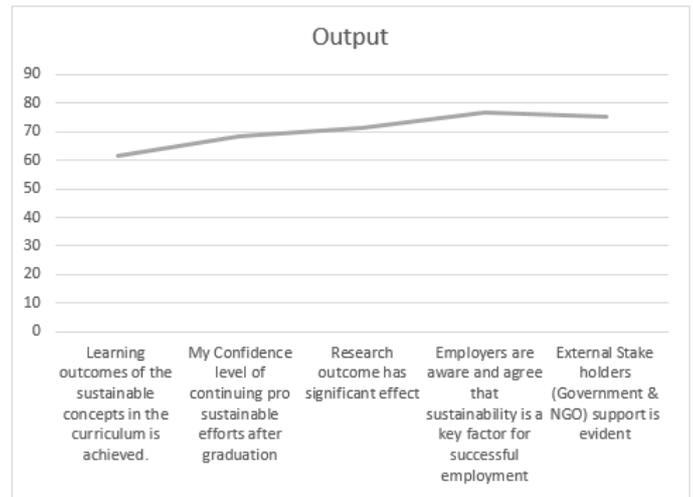


Graph: 2

From the table 2, every participant institution other than HEI4, believes that the processes need to be enhanced. The participant’s confidence scores are below 50 for the entire criteria when compared to any other category. Process is the key for success. Good intentions and beginnings will only be realized with appropriate support systems, which in this case are to be improved a lot.

Output						
Descriptions	Learning outcomes of the sustainable concepts in the curriculum is achieved.	My Confidence level of continuing pro sustainable efforts after graduation	Research outcome has significant effect	Employers are aware and agree that sustainability is a key factor for successful employment	External Stake holders (Government & NGO) support is evident	Average
HEI 1	46	48	56	58	91	59.8
HEI 2	58	63	72	85	52	66
HEI 3	64	72	81	82	81	76
HEI 4	78	86	89	91	94	87.6
HEI 5	61	72	59	67	58	63.4
Average	61.4	68.2	71.4	76.6	75.2	

Table:3

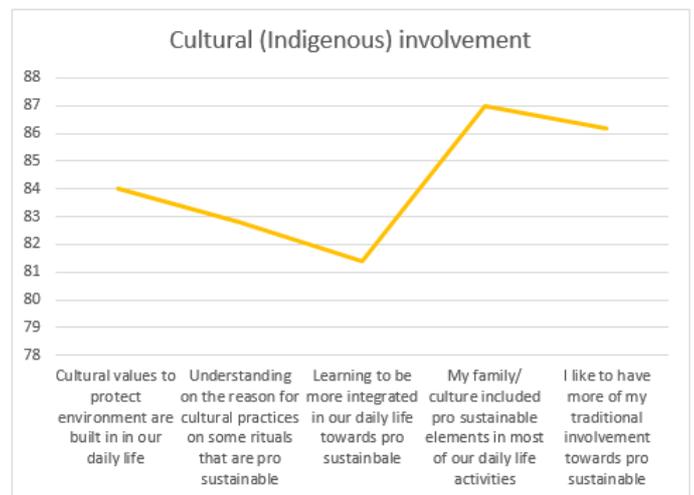


Graph: 3

From the table 3, the data is more supportive, which could be due to the support from the individuals and the support of the employers for the young graduates. This is a very positive movement whereas the success of building a sustainable society is entirely in the hands of the young generation of graduates and employers.

Cultural (Indigenous) involvement						
Descriptions	Cultural values to protect environment are built in in our daily life	Understanding on the reason for cultural practices on some rituals that are pro sustainable	Learning to be more integrated in our daily life towards pro sustainale	My family/ culture included pro sustainable elements in most of our daily life activities	I like to have more of my traditional involvement towards pro sustainable	Average
HEI 1	91	92	87	93	91	90.8
HEI 2	84	86	90	89	88	87.4
HEI 3	93	84	82	94	92	89
HEI 4	68	64	59	65	68	64.8
HEI 5	84	88	89	94	92	89.4
Average	84	82.8	81.4	87	86.2	

Table:4



Graph: 4

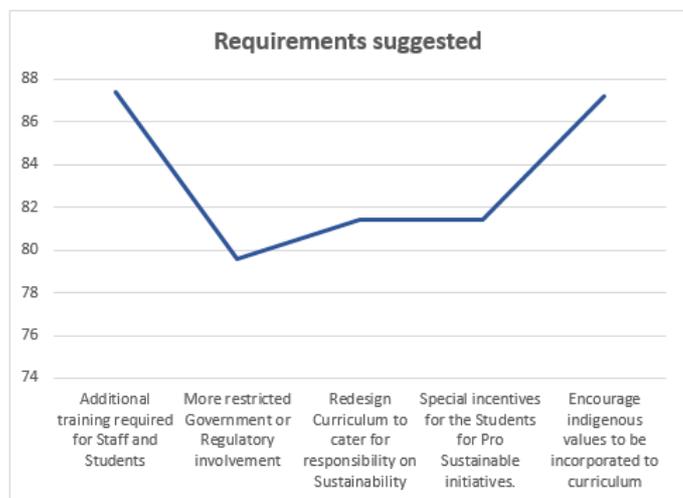
The key hypothesis for this research has been proved to be in line, according to the table 4 data. The response is more or less the same from various different HEIs irrespective of their differences. ASEAN

countries believe that there is a lot of their indigenous attachment within themselves that is coming out from their cultural values and beliefs for the support of environment. Any systems and trainings that might bring them back to those beliefs and attachments will make the sustainable society possible with long term impact.

Requirements suggested

Descriptions	Additional training required for Staff and Students	More restricted Government or Regulatory involvement	Redesign Curriculum to cater for responsibility on Sustainability	Special incentives for the Students for Pro Sustainable initiatives.	Encourage indigenous values to be incorporated to curriculum	Average
HEI 1	92	63	69	91	92	81.4
HEI 2	94	95	91	82	91	90.6
HEI 3	91	92	93	86	93	91
HEI 4	65	54	61	54	67	60.2
HEI 5	95	94	93	94	93	93.8
Average	87.4	79.6	81.4	81.4	87.2	

Table: 5

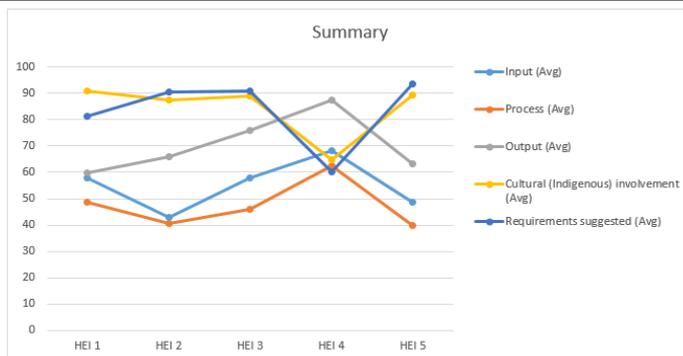


Graph: 5

The table 5 shows the participant’s shared their views and ideas of building a sustainable society. In this category too, it is interesting to see that they rated high for the point stating that their culture could help them to build the sustainable society in a more fruitful and natural way.

HEI	Input (Avg)	Process (Avg)	Output (Avg)	Cultural (Indigenous) involvement (Avg)	Requirements suggested (Avg)
HEI 1	57.8	48.6	59.8	90.8	81.4
HEI 2	42.8	40.6	66	87.4	90.6
HEI 3	58	45.8	76	89	91
HEI 4	68.4	62.4	87.6	64.8	60.2
HEI 5	48.8	40	63.4	89.4	93.8

Table: 6



Graph: 6

The averages for each of the processes are around 50-60. What is interesting here is, all the stake holders believe that either there is a lot of things to be implemented or they believe that the sustainability is inherent in their indigenous beliefs and culture which means they are contributing unknowingly towards what is essential for maintaining the sustainability. That is the hypothesis for this research. The activities to retain the sustainability are designed to cater these indigenous cultural efforts for building a sustainable society in a more fruitful, permanent and natural way.

4.0. Conclusion & Future Research:

The communities, particularly in the Southeast Asian countries, have many indigenous cultural practices that are inherently tuned towards integrating themselves with the environment and nature. The challenges here are very similar to that anywhere else around the world. If the Government Agencies, NGOs and the academic and scientific communities in ASEAN region ensure that those beliefs and practices are maintained by supporting them with the indigenous value systems, the current generation will be more committed towards their responsibility of achieving a sustainable society for the benefit of future generations. Commitment, training and persistence over time are essentially required for the current society. Southeast Asia is mini replica of the diversified world around us today. If the strategy works here, the strategy shall work anywhere and everywhere in the world. The future research is open for others to include those values and beliefs into individual learning in various cultures and the learning systems that are suitable to that particular society.

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