Theoretical Development of Sustainability Management System and Sustainability Performance: An Investigation of Malaysian Higher Education Institutions

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ABSTRACT

For the past two decades and more, there has been continuous development of new dimensions to measure Sustainability in Higher Education Institutions (HEIs). Sustainability Management System (SMS) is key point to measure Sustainability Performance (SP) of Higher Education Institutions (HEIs). Even there has been developed many approaches, but HEIs are facing big challenges to achieve sustainability in Malaysia. One of the issue, assessment tools developed own methodology to measure SP of HEIs. In fact, it is still not explicit actual SP. Objective of this paper is to identify appropriate dimensions, which are underlined by selected approaches and highlight trend of dimensional developed. Mixture of appropriate components from approaches and Environmental Management System (EMS) equals to SMS, which plays direct role on SP of HEIs. The study showed that a sustainability teaching is most important dimension and possible important component of SMS. Sustainable Development (SD) known as consist of three pillar: economic, environmental and social. However, paper concluded that it should be added political pillar as well.

INTRODUCTION

HEIs are ideal places to promote SD. “Colleges and universities are the most viable forces for change in today’s society. Their commitment to sustainability is critical to establishing new standards, developing ground breaking approaches and preparing future global citizens”. (Emmanuelle et al., 2010). It is very Important to have a model and SMS for University and Colleges to be Green, since Campuses are now integrated as part of community. MSS will assist to classify and identify status of Campus towards Greening, which directly shares the knowledge with other Education Centers.

More than 1 billion people are still living in extreme poverty, and income inequality within and among many countries has been rising; at the same time, unsustainable consumption and production patterns have resulted in huge economic and social costs and may endanger life on the planet (UN, 2013). HEIs are expected to play a significant role in contributing to creating a more sustainable world through their major functions of education, research and outreach (Fadeev et al., 2010). At the Stockholm Conference in 1972 sustainability in education was formally recognized on an international level to play an important role in fostering environmental protection. Since then many academic declarations, charters and partnerships were developed that were designed to foster environmental education (EE), SD, and Education for Sustainable Development (ESD) (Lozano R., 2011). In 1987, World Commission on Environment and Development, as known Brundtland Commission called for the development of new ways to measure and assess progress towards SD and this call highlighted in Agenda 21 of the Earth Summit in 1992, which held by UN (ASDPP, 1997). UN has announced 2005-2014, as decade of Development of Sustainable Education. The emergence of the SD dates back to ancient human religious beliefs where conservation of resources and struggle for social and economical equity are demonstrated as the duties of faithful people (Mill, 2005). Historians and Sustainable Development scholars such as Mebratu (1998) have described the history of SD in three following eras namely: 1. Pre-Stockholm. 2. From Stockholm to World Commission on
Environment and Development.

3. From 1987 to 2010 or Post-WCED.

The definition of SD and the term SD is described from various viewpoints and differ greatly from one and another. Below few definitions, those used widely in literature:

1. Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Brundtland’s Report, 1987).

2. Sustainable development involves devising a social and economic system, which ensures that these goals are sustained, i.e. that real incomes rise, that educational standards increase, that the health of the nation improves, that the general quality of life is advanced (Pearce et al., 1989).

Main concern among researches how cities or campuses are sustainable in actual. After Brundtland Commission’s initiatives, it was developed few approaches to assess SHEIs. Intensive literature review, indicated sustainability approaches used as terms model, practice, tool, framework and etc. In this research, those terms extended and combined with system and used new term Management System for Sustainability. Due to just existence of approach or model may not be useful if implementation system is not integrated. EMS is accepted widely in many sectors. However, SMS much vast compare to EMS. SD represents the balanced integration of social and environmental objectives with economic development. These three aspects of sustainable development – society, environment and economics were named as the three pillars of sustainable development at the World Summit on SD in Johannesburg in 2002. But recent development indicates, there is political pillar included to SD (UNESCO, 2012).

Education is one of the most important variables in explaining high levels of environmental concern and behavior (Zilahy et al., 2009; Zsóka et al., 2012). Many assessment approaches and models have been developed to assess SHEIs. In this paper, only online available approaches are adopted. Some approaches were created, but not sustained long and gradually discontinued. It created difficulties to trace those approaches to evaluate. However, it was found some information in review of literature. Choosing the right approach to assess SP of HEIs is challenging and complicated. Due to development of different approaches and methodologies rose from researchers and response to perspective, rationalized with cultures, policies and geographic locations. No single approach to ‘sustainable development’ or framework is consistently useful, given the variety of scales inherent in different conservation programs and different types of societies and institutional structures (Heinen, 1994).

Education for sustainable development is a dynamic concept that utilizes all aspects of public awareness, education and training to create or enhance an understanding of the linkages among 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 (UNESCO, 2005). Impact of activities and operations of Universities on environment draw the attention of global concern (Habib et al., 2008). As some Campuses of HEIs considered as small cities (Trachtenberg et al., 2008). Even efforts to achieve SHEIs have been started more than 2 decades ago, there is still lack of results to achieve SHEIs. Progress towards sustainability in HEI campuses is not only unsatisfactory, but it is also extremely slow and frustrating (Barlett et al., 2004; Garcia, 2006; Jenks–Jay, 2000).

Therefore, this paper proposes underlined dimensions for SMS, through intensive archival research method. It is highlighted trend of SD as well. Additionally, this paper discusses importance of achieving SHEIs. Then, approaches discussed extensively and development of new dimensions as well. The also paper presents some dimensions for university management to take into consideration and focus into those variables. Finally, some conclusion drawn and recommendation are in last part of this paper.

Problem Statement:

Masaru Yarime et al. (2012) agreed that the existing approaches towards sustainability are not sufficiently addressing the important variables, such as education, research and outreach activities in HEIs. They highlighted in their finding, that approaches mostly focused on environmental impacts of university operation and issues related to governance. They reviewed 16 sustainability approaches to find recent trends and issues addressed. Researchers have chosen, as first approach “Campus Ecology” approach, which was launched 1993 and most of the approaches created until 2010. Their study followed criteria for choosing the sustainability approaches and methodologies addressed in approaches qualitatively and quantitatively. Velazquez et al. (2006) argued that there is lack of clear objective and orientation about what exactly sustainability should be in HEIs. Through his review of literature, author defined sustainable university as: a higher education institutions, 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 case of their resources in order to fulfill its functions of teaching, research, outreach and partnership, and stewardship in way to help society make the transition to sustainable lifestyle. In other words, HEIs should be innovative enough to lead the society to sustainable lifestyle with their proven approaches. Innovation should be raised from
Education Centers (ECs) first than any other organizations. Shriberg (2002) supports the statement as well. He stated, faculty members, students, and academicians are considered to be the leaders of sustainable movement. He discussed about issues, that the number of universities engaged with SD is still small compared to total number of universities in the world, while engagement of SD is higher in companies. He concluded, that it is necessary in the future to think about a universal approach, which can facilitate the ranking of universities in terms of levels of sustainability. These findings require explore dimensions that connected to concept of sustainability and recent trend for sustainability. They are interconnected and must be combined to create universal approach. These dimensions should be developed by HEIs much a head than other sectors. However, development never should stop to find and develop new dimension to satisfy current demand. As Velazquez mentioned in his research paper, the concept of SD has been debated for years and it has become an endless debate. According to Kerstenet al. (2004), there are more than 70 various definitions for SD. In order to understand a phenomenon, it is recommended to study its history and investigate theories that have emerged in this process (Bhaskar et al., 1995). Bagheri et al. (2007) described SD that development no end of it, which is characterized by its complexity and uncertainty. SD is term that the meaning varies according to the interest, needs and values of different societies; nonetheless, most focus on promoting a better quality of life for their citizens. However, it must be direction and indication for HEIs, which placed their milestone to achieve sustainability in their university.

Berhnhart et al. (2007) stated in his article, number of organizations increased, those reported their SP through using various approaches, although it is very difficult to define sustainability in their organizations. SP in any organizations only can be measured through tools, but any tool can be used blindly. So it is possible reason HEIs are having problems to measure SP of their organization. Malaysian HEIs need right approaches, which included dimensions that Malaysian experts perceptions are included, as mentioned above, just approach may not be enough, unless system is integrated. In this article, discussed problems to find right content of SMS, which directly measures SP of Malaysian HEIs.

The process of assessing sustainability, both in theory and in practice, has been fraught with numerous challenges, mainly stemming from the broad range of views and varied interpretations regarding the concept of sustainability, and the extent to which it encapsulates the environmental, economic and social domains and the inter-linkages among them (Jeyalathy, 2011).

The paper aims to present underlined dimensions that contribute to create SMS for Malaysian HEIs. While previous studies described the basic characteristics, strengths and weaknesses of existing sustainability approach. As more HEIs started to focus on SD, approaches will create confusion on dimensions and it is difficult to trace to find right approach that followed with new developments. This paper also aims to identify content of SMS for HEIs, however further survey should be carried out to determine exact dimension, which should be included in SMS for Malaysian HEIs. Paper puts milestone to create localized SMS for Malaysian HEIs and to measure their SP. As many scholars highlighted, innovation and creativity should be raised first from ECs only than circulate to society and other sectors. Finding of this paper contributes some knowledge and indication about underlined dimensions and system, which can be developed further and use to measure SP in Malaysian HEIs. Platform can be adopted in other industries as well.

**Literature Review:**

There are number of studies conducted to create dimensions to measure SP of HEIs. There are different categorizations for SHE, which stem from different definitions and different perspectives of this field (Omidreza, 2010). These differences root in the intuitiveness of the mother concept of SHE, which is SD (Blackburn, 2008). For examples, Omidreza’s (2010) archival research method identified 24 SHE assessment approaches out of which 17 approaches are discussed and analyzed thoroughly; however, the seven remaining approaches, which were less important and popular, are just portrayed generally. Other 17 approaches distinguished from one to another.

Table 1 underlines most highlighted variables and it gives some indication they could be proposed variables for content of SMS. However, it is not certain yet. Comparison sustainability approaches that were created from different part of the world and summary of all approaches that were reviewed in table 1. It is arranged in chronological order and only dimension indicated. It was selected 11 approaches which still available online.

Existence many approaches and distinguished dimensions complicates process of assessing SP of HEIs in definite. Choosing any dimensions according to their capability does not reflect sustainability in university. HEIs with intention to achieve sustainability in their organization should have full time team to address identify right direction. As first aim of this paper to identify possible underlined dimensions for SMS from 11 approaches. Underlined dimensions can be used in Malaysian HEIs to achieve SHE and avoid unnecessary implementations from other approaches.

Penn State Indicators Report (PSIR): Uhland his team intended to create a report for a wide range of readers, especially, students, staff, faculty, administrators, and members of the community at
large. It reflects the University’s growing commitment to environmental stewardship and builds on the literally hundreds of initiatives undertaken by University staff to promote sustainable practices. First edition of report was launched in 1998 and attracted national attention. There are 10 dimensions, mainly, energy, water, material resources and waste disposal, food, land, transport, building environment, community, research and decision-making. There is special approach on PSIR, report intents not simply to supply answers but to raise questions. The questions center on ecological responsibility, research ethics, the wisdom of continual growth, the openness of decision making, the uncritical acceptance of technology, and the moral responsibilities of the University—in short, questions that are worthy of the attention of all vital institutions (Uhl et al., 1998).

Environmental Management System Self-Assessment Checklist (EMSSAC): Thompson et al.

Sustainability Assessment Questionnaire (SAQ) for Colleges and Universities: Kelly et al. designed the questionnaire to assist HEIs in assessing the sustainability in its teaching, research, operations and outreach. Campus representatives who are knowledgeable about and responsible for the activities mentioned in each section will carry out assessment. This survey of sustainability covers seven critical dimensions of higher education: Curriculum, Research and Scholarship, Operations, Faculty and Staff Development and Rewards, Outreach and Service, Student Opportunities, Administration, Mission and Planning and there are 25 elements under 7 dimensions. With input from many colleagues, the SAQ was developed between 1999 and 2001.

State of the Campus Environment Report (SCER): McIntosh et al. created the report, which measures environmental performance and sustainability in HEIs in USA. HEIs are expected to
take an active role in creating and modeling solutions to environmental problems. Yet there is little information available to show how successful our colleges are in carrying out that mission. While extensive information is available on most other aspects of university performance - such as enrollments, costs, competitiveness, and cultural diversity - no such data on environmental performance exists. SCER is designed to fill this problematic information gap. The survey and resulting report will help schools assess, compare and improve their own environmental performance, and will heighten public interest in this key aspect of educational performance. Although, SCER is designed for USA, methodology and some dimensions can be adopted for other countries’ HEIs to assess their sustainability performance. First edition of report card published in 2001. SCER addresses mainly to 3 dimensions, management system, curricula and operations. They consist of 18 elements with 44 questions.

Auditing Instrument for Sustainability in Higher Education (AISHE): Roordaand his team members created a tool based on a model for quality management, developed by the European Foundation for Quality Management, and enhanced by the Institute for Dutch Quality Management (INK). The original model has been developed to be used in commercial companies, for instance in industry. In the AISHE method, 5 dimensions with 20 elements are defined. The Dutch national working group in Denmark developed AISHE, and it was published first in 2001.

Campus Sustainability Assessment Framework (CSAF): Cole Lindsey’s framework considered as most Comprehensive, Practical assessment tool which is proposed in 2003. It uses a bench marking and stakeholders’ opinions (Omidreza, 2010). It is very popular in Canadian HEI. CSAF recommended as a constructive assessment approach for SHE (Beringer, 2006). The Sierra Youth Organization Coalition (SYC) has become the body responsible for coordinating the CSAF until now. SYC is a Non-Governmental Organization (NGO) in Canada with the aim to strive towards sustainable ecological and social prosperity (Fadzil et al., 2012). The approach consists of 10 dimensions with 33 elements. According to Omidreza (2010), CSAF is considered one of the most comprehensive approaches. The scholar considered two theories namely; Three Bottom Line (TBL) and Theory of Avoiding Subjective Judgment (TSJ) and three criteria of novelty, comprehensiveness and popularity are set as the scale of strength and weakness. It was launched in Canada.

A Sustainability Assessment of New York University (SANYU): Alvarez and his working group provided a snapshot of NYU’s environmental performance, case studies of peer institutions, detailed analysis of institutional data, and a set of micro- and macro-recommendations to guide the greening of the campus. The heart of the report is the Sustainability Index, created to assess the school’s progress towards sustainability. The Index consists of 8 dimensions with 41 elements. Dimensions are energy, building and grounds, purchasing and asset management, waste management, transportation, food, academics, awareness, and climate change. Report was launched in 2006.

Sustainability Tracking and Assessment Rating System (STARS): Zahniser and other his partners created tracking system and their project coordinated by The Association for the Advancement of Sustainability in Higher Education (AASHE). AASHE is an association of colleges and universities in the United States and Canada, which seek to build a sustainable future. This tool is a voluntary project, and is a self-reporting framework for recognizing and measuring relative progress toward sustainability by colleges and universities (Fadzil et al., 2012). STARS also considered one of the most comprehensive approaches according to set criteria of Omidreza. This approach has 3 well-developed dimension, which is education and research, operations, planning, administration and engagement and last forth dimension is innovation and it is in process to be developed. Innovation is not highlighted in details. There is very unique dimension; due to innovation was not highlighted in any other dimension although it is an important instrument in any organization. Innovation is normally considered a vital factor that leads to the success of institutions of any types.

Campus Sustainability Assessment: University of Oregon (CSAUO): Barry examined in their approach the degree to which campus activities, institutional commitment, and infrastructure reduce the campus footprint and encourage progress towards sustainability. In this research work, authors covered 11 dimensions and they are governance, endowment investment, academics and culture, materials management, food, greenhouse gas emissions, energy, transportation, water, landscaping and building. There are 32 elements under these dimensions. It was first published in 2007 and Chris Stratton has written terminal project in 2010 and assessed university sustainability performance with 3 dimensions, which energy, water and transportation.

Unit-Based Sustainability Assessment Tool (UBSAT): This sustainability assessment tool was developed for use in the Swedish/Africa International Training Program (ITP) and as a resource book to compliment the UNEP Mainstreaming Environment and Sustainability into African Universities (MESA). It is part of the broader UNEP MESA initiative, which aims to resource African Universities to mainstream environment and sustainability into African Universities (UBSAT, 2009). It was first published in 2009. Approach focuses all sectors of HEI and encourages sustainability concepts into their
core function. Approach consists of 4 dimensions, teaching, operation and management, student involvement, policy and written statements and there are 22 elements under 4 dimensions.

UI GreenMetric World University Raking (UIGM): Togo and his team’s current objective is to promote effort for sustainability by universities, evaluate the commitment to combat climate change, encourage the use of energy efficient appliances, conserve water and energy using eco-technic tools, enforce the use of environmentally friendly transportation method, as well as to reduce the carbon footprint. The UI GreenMetric World University Ranking is an initiative of Universitas Indonesia, which was launched in 2010. There are 6 dimensions, mainly setting and infrastructure, energy and climate change, waste, water, transportation and education. Under these dimensions there are 41 elements.

As noted above, indicators are often partitioned into the three dimensions – environmental, social and economic or integrated in some way to give a means of measuring progress towards or away from sustainability. However, in many instances, the indicators that are used to assess performance in the individual dimensions are identical to those used to measure sustainability, although in the latter case indicators from different dimensions are often considered in combination to show the positive or negative impact of performance in one dimension on performance in the remaining dimensions (Warhurst, 2002).

Conceptual Framework:

This paper analyses the link between SMS and SP. SMS is a newly emerging term, which aims to address the all aspects of SD and best system to implement selected dimensions, which measures SP of organization. However, this term under development stage. Assessment approaches are frameworks, tools, questionnaire kit tools, and checklists, which enable a HEI to assess the level of SHE in their institution (Bossel, 2002). As a structured framework for the assessment and management of an organization’s environmental impacts and for the incremental improvement of environmental performance, this university EMS incorporates the organizational structure, procedures, and resources for environmental management, and can be readily compared to quality management systems, from which they ultimately derive (Simkineset al., 2004).

Melniket al., (2003) concluded in his research a formal EMS does play a role in improving overall performance; it also affects the frequency with which various environmentally related options are used. In his research it was analyzed only manufacturing sector, logically having EMS should improve overall environmental performance of HEIs as well. To support this statement, Antje (2012) confirms assessment approach enhances campus sustainability. Some authors request a campus-specific EMS, as universities are perceived to be more complex than industries, enterprises or private sector corporations and to have different direct and indirect interactions with the environment, mainly with regard to the input and output emissions (Antje, 2012). It should be taken into consideration, implementation just EMS will improve environmental performance of HEIs, but it would exclude aspects of sustainability. That is one of the reason there is need for SMS to cover all aspects of sustainability. It is important to recognize the gap between indicators and a coherent and effective management system.

Based on review, there is positive effect of SMS to SP of HEIs. SMS should be considered part of overall Management System in HEIs. However, it must be considered other factors, which affects SP of HEIs. For example, Herremans et al., (2000) suggested guiding principles, reporting to the Board, full-time staff, commitment, communication, defining authority, environmental audits, and capability in the form of people, information, finances and equipment will lead better environmental performance of HEIs. With support of scholars’ findings, conceptual framework is to be as Figure 1. However, content of SMS will be discussed in conclusion and discussion chapter.

![Fig. 1: Conceptual framework of study.](image_url)

Methodology:

In this article, an archival and content analysis was conducted as ultimate goal to identify underlined dimensions and for comparison of new dimensions among sectors. By performing archival study techniques over the existing scholarly documents in the time span of 4 decades some of the different definitions of SD and almost last 2 decades development of SD approaches on SHE were partially compiled and presented. 24 approaches were identified and from them only 11 were still available for review in online. These 11 approaches’ relevant dimensions and their elements were explained in detail. It was focused mostly
published and some unpublished articles, some articles from conferences, also HEIs and UN reports and number of approaches from different fields. The time frame for literature was from 1972 to 2014 to learn more about history of SD and from 1998 to 2014 for assessment approaches. However, it must be taken into consideration, not all approaches are highlighted, instead it was mentioned only popular and available ones. Finally, a brief introduction was written on the important dimensions of these assessment approaches.

Discussion And Conclusion:
The SD represents the balanced integration of social and environmental objectives with economic development. As first aim of this paper to identify underlined dimensions those possible can be dimensions for Malaysian HEIs. It is challenging process to set indicators. This weakness has been regarded as the absence of comprehensive approaches or frameworks and lack of sufficient sustainable development indicators (Omidreza, 2010). Dimensions finalized as possible dimensions, which can be considered while creating SMS for HEIs. However, to determine exact dimensions, which can be as content of SMS, survey should be carried out among Malaysian HEIs. As this article is conceptual, it was not determined content of SMS for Malaysian HEIs. Survey should be carried out only among experts of SD from HEIs. However, creating SMS which Malaysian experts perceptions included, will not guarantee better SP of HEIs, as it also depends Universities’ methodology towards SD. Review showed that Curriculum Dimension gained biggest value. Osman et al., (2014) concluded in his research, that environmental knowledge have significant impact on environmental behavior. Environmental behavior leads to better SP of HEIs. Sterling (2004) explained sustainability in curriculum, as sustainability is not just another issue to be added to an already overcrowded curriculum, but rather can be a gateway to a different view of curriculum, pedagogy, organizational change, policy, and, in particular, ethos. Furthermore, following dimensions also should be considered as very important dimensions as well. They are energy, water, waste, land, expertise, transport, green building, research, environmental policy, and student opportunities. Table 1 provides necessary information for HEIs, those started to put their milestone towards SD. Yarime (2010) stated, integrated assessment tools would be required to make appropriate evaluation of this kind of ambitious attempts, which will go beyond the existing disciplinary boundaries and organizational barriers so that HEIs are encouraged to lead efforts for making steady progress towards sustainability.

UNESCO considered politics and culture key dimensions of SD. These dimensions influence the interactions of and between the three pillars. They are concerned with the values we cherish, the ways in which we perceive our relationship with others and with the natural world, and with how we make decisions. The values, diversity, knowledge, languages and worldviews associated with culture and politics strongly influence the way issues of sustainable development are decided and, thus, provide it with local relevance. Even, politics considered as fourth pillar of SD. While research is being carried out on SMS content, it should not be forgotten new developed dimensions as well.

Another aim of this paper is to explain SMS between dimensions and system. As scholars highlighted, it is important to recognize the gap among them. Dimension and system is interconnected. Having right dimensions with consideration geographical, cultural and political perceptions with good system will lead to better SP of HEIs. Management of HEIs always should consider to leader of their field of teaching and they should lead the industry and implementing new findings first in their organization and than affecting the society and other sectors. As it is very important HEIs stand on top of any development. When dimensions closely analyzed, it can be seen, there are new dimensions are being developed. In 2006, STARS mentioned about importance of innovation dimension in HEIs and in 2009, UBSAT mentioned importance of student politics dimension. If there is comparison of new dimensional developments in UNESCO and HEIs practices on SD, it is clear that dimensional development comes from HEIs. However, there is gap on development. Only UBSAT mentioned about political dimension. As there are many approaches and STARS and CSAF considered as most comprehensive approach for now, there is possibility HEIs may not focus on other approaches, which causes important dimension to be left over. As scholars stated, to build sustainability in any organization is slow process and changes require time. SD experts in HEIs must look at all aspects and closely follow up with new developments. Achieving sustainability in HEIs should give result in regional and national level. Velazquez et al., (2008) proposed sustainability initiatives scheme to improve level of regional sustainability. According to him, Education, Research, outreaching and partnership will affect regional sustainability level. He suggested HEIs to create close partnership with local industries as well. Furthermore, review showed those stakeholders and their pro environmental behavior impacts SP of HEIs and management responsibility is underlined.

Assessment of SHE has a long history, and many initiatives has been taken in the last decades which by 2004 more than 596 SHE assessments had been performed in the USA and 637 SHE assessments were carried out outside of USA (Savanick, 2004). However according to Omidreza (2010) all those assessment approaches lack of 1 or 2 aspects of SD. This research combines available
approaches and dimension. Through research, new terminology like SMS was introduced. In this article, the term SMS should be understood as consisting of four main pillar dimensions of SD combined with implementation methodology and good system. While it was mentioned good system, authors referring management system, such as Environmental management system, or Quality management system. Omidreza (2010) stated in his research, that western SHE assessment approach couldn’t be applied in Malaysia blindly. As a result of literature review, SMS should be localized. As mentioned above, four pillars dimensions should be derived from decisions of local experts’ perceptions. Thus, dimensions may differ from one to another according to their need, whilst maintaining the standard level. Standard level of Sustainability must be decided in national level. Implementation methodology can be adopted. Finally, management should lead their lectures, staff and students to perform better SD. In this case, SMS plays secondary role, but implementation becomes priority, through management role. The type of impact to society depends significantly on the amount of HEIs efforts towards sustainability. Limited efforts equals to limited impact. Therefore, in order to attain a higher impact, all HEIs should be performed in national level.

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