CRITICAL SUCCESS FACTORS IN IMPLEMENTING SUSTAINABILITY IN PRIVATE HIGHER EDUCATION INSTITUTION

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ABSTRACT: Higher Education Institutions should play a vital role in turning society to become sustainable through their power in producing and educating the heirs' generations. Broadly speaking, the capability of a research center should be enhanced with regard to the sustainability agenda. The concepts and philosophy of sustainability should be taught to the student so that the student can embrace their knowledge once they enter their career life. In addition, from an organisational perspective, the sustainability concept should be embraced within a daily routine task in organizational management. Furthermore, it was seen that as sustainable Higher Education Institutions should refer to the four-dimension system – education, research, community outreach, and campus operation. This research focusing only on the education dimension system. The objectives of this study, it's to discuss the critical success factors in implementing sustainability in a private Higher Education Institution. Thru the descriptive literature review using indexed journal paper within 10 years of publication. In conclusion, this paper.

Keywords: Private Higher Education Institution, education dimension, sustainability implementation

1. INTRODUCTION

Sustainable development is a trend in the last few decades, which has been implemented all over the globe due to its important role in society. In addition, Higher Education Institutions are also actively working towards sustainability by implementing sustainability practices within the institutions themselves [1, 2]. The reasons for implementing sustainable development within the Higher Education Institutions are mainly to tackle the challenges facing by Higher Education Institutions.

According to [1, 3], Higher Education Institutions are 'small cities' that have serious direct and indirect impacts on the environment due to their large population and various complex activities in the institutions. No specific definition to define what is actually sustainability in Higher Education Institutions. However, speaking about sustainability, it is always referred to as the main ideas of sustainable development, which are the three bottom-line ideas: economic, social, and environment [18].

Regardless, the main idea of sustainability itself, sustainability in Higher Education Institutions can be discussed in institutions' goals policy, as well as long-term perspective like operational within the institutions. Higher Education Institutions should play a vital role in turning society to become sustainable through their power in producing and educating the heirs' generations. Broadly speaking, the capability of a research center should be enhanced with regard to the sustainability agenda. The concepts and philosophy of sustainability should be taught to the student so that the student can embrace their knowledge once they enter their career life.

In addition, from an organizational perspective, the sustainability concept should be embraced within the daily routine task in organizational management. Furthermore, it was seen that as sustainable Higher Education Institutions should refer to the four-dimension system - education, research, community outreach, and campus operation, therefore, all dimensions of sustainable higher education institutions must be fully adopted including the fifth

dimension recommended by Lozano (2003), where sustainability performance should be assessed and reported. Therefore, this paper its to discuss the critical success factor in implementing sustainability in a Private Higher Education Institution.

2. **CRITICAL SUCCESS FACTORS**

According to [4][5] and strongly emphasis by [7, 8], the changes in Higher Education Institutions are not as easier as flown in a mind, where there is a conflict or divergence in vision and perception from different stakeholders in the management of the Higher Education Institutions in implementing the sustainability assessment. Even though there are barriers to the procedure in implementing sustainability assessment in Higher Education Institutions, they still have a low probability of becoming success factors, regardless of the context.

For example, in the perspective of lack of policy making, in order to promote sustainability and their assessment, the existence of organizational structures with restricted disciplines or the academic conservationism or traditions that tie Higher Education Institutions to the old mechanism of solo mentality is remained to occur [12, 18]. However, these constraints at the level of organization can become the trigger, so that other stakeholders of the academic community can launch small strategies and mobilize peers in order to develop and scale their efforts [4][5]

3. METHODOLOGY

This research aims it's to identify the most cited critical success factors from the descriptive literature review and discussion from previous authors. The research or publication paper has been considered to be used for this study its within 10 years of publication which are from 2009 to 2019. The publication across open access journal, Scopus and WOS journal of publication. About 45 papers have been used from the filtration of 100 papers relevant to the discussed research study. About 5 important elements have been highlighted which extended and abstract from [18]. The data cited from 22 of the researchers.

Table I. Critical success factors and strategy for sustainability assessment in the Higher Education Institutions

	assessment in t	the Higher	Education Institutions	
No.	Critical Success Factors	Strategy		
1.	Internal Structures of	٠	Teaching based on real-life	
	the Institutions		problems, which the collaborative cooperation need	5. Resources
			from students, academician, and	
			academic staff	
		٠	Research and teaching can be	
			integrated to generate a self- regulated process of mutual	
			learning among the actors	
			involved	
		٠	Each institution had	4. DISCU
			mechanisms in place to monitor sustainability measures, such as	Critical success
			energy consumption and carbon	which are inter factors to the
			production	factors to the framework, and
		٠	Flexible institutional	I. By referring T
			management in implementing sustainability assessment	by previous research
		•	All factors involve the well-	By referring the
			known concept of sustainability	structures of the
			assessment in Higher Education	factors as Teach
2	Enternal		Institutions	collaborative co
2.	External Factors to the	•	External reputation as the image, goodwill, and credibility	and academic sta
	Institutions		of Higher Education Institutions	to generate a self
		•	Make the assessment and	the actors involv to monitor su
			certification as a quality driver	consumption an
			to measure the successful	management in
			implementation of the sustainability concept in Higher	all factors involve
			Education Institutions	assessment in H
		•	Support program incentives	five factors stat
			from the government	based on real
		•	Assessment by international	cooperation need
			experts to encourage Higher Education Institutions to	staff with 1 time
			establish sustainability practices	external factors reputation as the
		•	External financing program to	Education Institu
2			support sustainability initiatives	as a quality driv
3.	Stakeholders	•	The commitment of the professors and the personnel,	of sustainability
			management, and board and the	Support progra
			students with compromising of	Assessment by
			the faculty and the staff	Education Institu
		•	Provide relevant information to	and External fi
			be transmitted from the academic side to government	initiatives. For a
			agency and public	number of referr
		•	Academic staff actively work	The third elem
			on sustainability knowledge to	commitment o
			be delivered to the student,	management and
			which soon going to be a future leader	of the faculty and
		•	Increase of environmental	transmitted from
			awareness of internal	public; Academ
			stakeholders	knowledge to be
		•	Recognition of the work of the	to be a future lea
4.	Institutional	•	leader and his team The integration of sustainability	internal stakehol leader and his te
••	Framework	•	into Higher Education	refer to the incre
				icici to the mere

5510,C	ODL	. Shull o	Sel.Int.(Lanore), 52(4),401-405,2020								
eed , and	5.	Resources	 plan, mission, goals, and objectives Management of Higher Education Institutions highly supports sustainability assessment implementation. The availability of sources of funds and people to responsible for implementing the sustainability assessment 								
[- 			implementation of Higher								
L			Education Institutions.								

DISCUSSION AND RECOMMENDATION

Critical success factors can be classified into 5 main factors, which are internal structures of the institutions, external factors to the institutions, stakeholders, institutional framework, and resources. For further explanation refer Table I. By referring Table II further discussion on frequency cited by previous researchers been recorded.

Table I as well for the first element internal e institutions can be further described with 5 hing based on real-life problems, which the operation need from students, academician, taff; Research and teaching can be integrated If-regulated process of mutual learning among ved; Each institution had mechanisms in place ustainability measures, such as energy nd carbon production; Flexible institutional implementing sustainability assessment; and lve the well-known concept of sustainability Higher Education Institutions. Among all the ted, the higher times referred its Teaching life problems, which the collaborative d from students, academician, and academic e referred from 22 cited. Second elements are to the institutions with 5 factors as External e image, goodwill, and credibility of Higher utions; Make the assessment and certification ver to measure the successful implementation y concept in Higher Education Institutions; ram incentives from the government; international experts to encourage Higher utions to establish the sustainability practices; inancing program to support sustainability all factors listed, all factors shared the same rred frequencies, which are 7 times from 22

The third element is Stakeholders with 5 factors: The commitment of the professors and the personnel, management and board and the students with compromising of the faculty and the staff; Provide relevant information to be transmitted from academic side to government agency and public; Academic staff actively work on sustainability knowledge to be delivered to the student, which soon going to be a future leader; Increase of environmental awareness of internal stakeholders; and Recognition of the work of the leader and his team. There are 2 factors highly cited which refer to the increase of environmental awareness of internal stakeholders; and Recognition of the work of the leader and

Institutions policies, strategic

his team - 10 times referred from 22. The fourth element is an institutional framework with 2 factors highlighted as the integration of sustainability into Higher Education Institutions policies, strategic plan, mission, goals and objectives and management of Higher Education Institutions towards sustainability highly support assessment implementation has higher times referred by the previous researcher. And the last element is resources by a 1highlighted factor - the availability of a source of funds and people responsible for implementing the sustainability assessment implementation of Higher Education Institutions. This can be concluded that all these 5 elements as a critical success factor to look forward to defining the successful implementation the sustainability in a Private Higher Education Institution.

5. DISCUSSION AND RECOMMENDATION

As per the discussion in this paper, the critical success factor to be considered to successfully implementing sustainability in Private Higher Education Institutions is fully highlighted and discussed. Perhaps the discussion may lead to better implementation of the sustainability concept itself in Private Higher Education Institution as this sector facing sustainable issues to maintaining a better quality of the service in education.

	Critical Success Fa	octors																								
No.			Author	Ceulemans et al. (2015)	-ozano et al., (2014)	shi and Lai (2013)	ruan and zuo (2013)	Koenn and Uitto, 2013	Jiouna et al., 2013	-ozano and Yong (2013)	farime and Tanaka (2012)	White and Koester (2012)	ceulemans et al.,(2011)	Vloon and Orlitzky (2011)	seto-Pamies (2011)	Wring and Bennet (2011)	Bennett (2011)	Glover et al., (2011)	-ozano (2011)	Vladeera et al., (2011)	Waheed et al., (2011a)	Waneeu et al., (2011.0.)		-ozano (2010)	анивеі (2007)	
		i	Teaching based on real- life problems, which the collaborative cooperation need from students, academician, and academic staff	1	1	1	1	1	1	1	1								1	1	1		_			1 1
		ii	Research and teaching can be integrated to generate a self- regulated process of mutual learning among the actors involved		1		1		1		1								1	1	1					7
1	Internal Structures of the Institutions		Each institution had mechanisms in place to monitor sustainability measures, such as energy consumption and carbon production		1		1		1		1								1	1	1					7
	iv	Flexible institutional management in implementing sustainability assessment		1		1		1		1								1	1	1					7	
		v	All factors involve the well-known concept of sustainability assessment in Higher Education Institutions		1		1		1		1								1	1	1					7
		i	External reputation as the image, goodwill and credibility of Higher Education Institutions		1		1		1		1								1	1	1					7
2	External Factors to the Institutions	11	Make the assessment and certification as a quality driver to measure the successful implementation of the sustainability concept in Higher Education Institutions		1		1		1		1								1	1	1					7

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		ш	Support program incentives from the government		1		1		1		1								1	1	1					7
	iv	Assessment by international experts to encourage Higher Education Institutions to establish sustainability practices		1		1		1		1								1	1	1					7	
		v	External financing program to support sustainability initiatives		1		1		1		1								1	1	1					7
3 Stakeholder		i	The commitment of the professors and the personnel, management and board and the students with compromising of the faculty and the staff		1		1		1		1							1	1	1	1					8
		ii	Provide relevant information to be transmitted from academic side to government agency and public		1		1		1		1							1	1	1	1					8
	Stakeholders	III	Academic staff actively work on sustainability knowledge to be delivered to the student, which soon going to be the future leader	1		1		1		1			1	1				1	1							8
		iv	Increase of environmental awareness of internal stakeholders	1		1		1		1								1	1			1	1	1	1	1 0
		v	Recognition of the work of the leader and his team	1		1		1		1								1	1			1	1	1	1	1 0
4 Institutional Framework		i	The integration of sustainability into Higher Education Institutions policies, strategic plan, mission, goals, and objectives	1		1		1		1		1	1		1	1		1	1							1 0
	TI BILLEWOIK	11	Management of Higher Education Institutions highly supports towards sustainability assessment implementation.	1		1		1		1			1	1	1	1	1	1	1			1	1	1	1	1 5
5	Resources	i	The availability of sources of funds and people to responsible for implementing the sustainability assessment implementation of Higher Education Institutions.	1		1		1		1			1	1	1	1	1	1	1			1	1	1	1	1 5

But then it's not limited to the Private Higher Education Institutions only, but it can be practiced in Public Higher Education Institutions as well. Even the arrangement, management, and policy can be slightly different and the difference still not a major gap to implementing sustainability in Higher Education Institutions as an overall commitment.

Ministry of Education should fully support and empower this concept by providing an incentive to the Higher Education who willing and practicing this concept in their institutions. A full support from the ministry, policy maker, management, academia, and the student may lead to a better implementation of this concept to Private as well as to Public Higher Education Institutions.

6. **REFERENCES**

- Alonso-Almeida, M. M., Marimon, F., Casani, F. & Rodriguez-Pomeda, J. (2015). Diffusion of sustainability reporting in universities: Current situation and future perspectives. Journal of Cleaner Production. 106, 144–154.
- [2] Alshuwaikhat, H. M. & Abubakar, I. R. (2008). An integrated approach to achieving campus sustainability: assessment of the current campus environmental management practices. Journal of Cleaner Production. 16(6), 1777-1785.
- [3] Bert J. M., de Vries & Arthur C. P. (2008). Conceptualizing sustainable development- An assessment methodology connecting values, knowledge, worldviews and scenarios. Journal of Ecological Economics. 68: 1006-1019.
- [4] Boman, J. & Andersson, U. P. (2013). Eco-labelling of courses and programs at University of Gothenburg. Journal of Cleaner Production. 48.
- [5] Clugston, R. M. & Calder, W. (2002). Higher education. In: J.C. Dernbach (Ed.), Stumbling Towards Sustainability (Pp 631). Washington DC: Environmental Law Institute.
- [6] Calder, W. & Clugston, R. M. (2003). International efforts to promote higher education for sustainable development. Planning for Higher Education, 31, 30- 44.

- [7] Christian R., Luis V. & Clemens. M. (2015). Sustainability assessment in higher education institutions. Routledge Handbook of Higher Education for Sustainable Development. Pg. 331.
- [8] Chris S., Richard B. H. & Richard B. N. (2006). Sustainable development in a post- Brundtland world. Journal of Ecological Economics, pg. 253-268.
- [9] Cole, L. (2003). Assessing sustainability on Canadian university campuses: development of a campus sustainability assessment framework. Royal Roads University.
- [10] Cole, L. & Wright, T. (2005). Assessing sustainability on Canadian University campuses: development of a campus sustainability assessment framework. Handbook of Sustainability Research. 705-725. Frankfurt: Peter Lang.
- [11] Cortese, A. D. (2003). The critical role of higher education in creating sustainable future. Planning for Higher Education. 31(3): 15-22.
- [12] Dawe, G., Jucker, R. & Martin, S. (2005). Sustainable development in higher education: Current practice and future developments. York, UK: Higher Education Academy.
- [13] Folke, C. Carpenter, S., Elmqvist, T., Gunderson, L., Holling, C. S. & Walker B. (2002). Resilience and sustainable development: Building adaptive capacity in a world of transformations. Ambio. 31(5), 473-40.
- [14] Geng, Y., Liu, K., Xue, B. & Fujita, T. (2013). Creating a "green university" in China: A case of Shenyang University. Journal of Cleaner Production. 61:13–19.
- [15] Hesselbarth, C. & Schaltegger, S. (2014). Educating change agents for sustainability - Learnings from the first sustainability management master of business administration. Journal of Cleaner Production. 62: 24–36.
- [16] Klein-Banai, C. & Theis, T. L. (2013). Quantitative analysis of factors affecting greenhouse gas emissions at institutions of higher education. Journal of Cleaner Production. 48: 29-38.
- [17] Larsen, H. N., Pettersen, J., Solli, C. & Hertwich, E. G. (2013). Investigating the carbon footprint of a university: The case of NTNU. Journal of Cleaner Production. 48, 39-47.
- [18] Lozano, R. (2003). Sustainable development in higher education incorporation: Assessment and reporting of sustainable development in higher education institutions. Lund: The International Institute for Industrial Environmental Economics.

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