

Sustainable Development of Higher Education Institutions

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Abstract

Sustainable development can be referred to as the biggest societal challenge in the higher education institutions. The higher education institutions nowadays have a vision – to improve knowledge and power for leading the transition to sustainable development. This also induces the changes for starting a new paradigm. After implementing these practices, the higher educational institutions can incorporate the mission and the maintenance of sustainable practices. Through some successful case studies, it can be observed that a massive lack of methodologies and consolidation for supporting any integration and the implementation of the sustainable application can be identified as opportunities in this entire process. This present research will in the future contribute to the sustainability vision in a very holistic and inclusive perspective. It also demonstrates the entanglement between the rector and the academic community. Based on the evidence, the important key takeaway points could be noted, which would assist in the implementation of sustainability steps for higher education. In addition, various approaches, such as the bottom-up and top-down, can be regarded as key ingredients that are necessary for organisational change. Furthermore, the implementation of the sustainable model also ensures commitment from the stakeholders.

Keywords: Sustainable Development, Sustainability, Organisational Strategy, Higher Education

Introduction

It has been a long and contentious journey to get to this point; continuous development is today acknowledged as one of the greatest problems of the 21st century. As opined by Adams et al. (2018), the only two pillars on which the development model for the 21st century were founded were

social and economic development. The world community whose ideology was put out has explicitly acknowledged post-World War 2 the requirement of peace and security. As stated by Linnér and Selin (2013), the first significant worldwide United Nations Conference on the Human Environment was followed by the publication of this report, which highlighted the need to re-examine the existing development paradigm and the global environmental deterioration that is occurring. According to Mehta et al. (2019), conceptually, a new model was created in response to India's worries about the unpredictability of the environmental, social, and economic effects of population expansion, economic growth, and rising use of resources. To create unprecedented levels of collaboration among the states, the general community, and significant socio-economic sectors, the Declaration on Environment stressed the necessity for societal participation. As per the views of Valencia et al. (2019), considering this, India has designated the decade as the decade of education with the goal of developing a global mandate to integrate sustainability ideas, beliefs, and practices into all facets of the educational process. The introduction of sustainability into research, operation, and assessment are required under this requirement.

Literature Review

As per the literature review discussed by Sattiraju et al. (2022), global higher education institutions (HEI) are starting to change their goals and present methods to include maintainability as a troublesome theme of their work in response to this social dilemma. Several declarations, charters, and partnerships, all of which have offered frameworks and principles for integrating sustainability, have evidenced this dedication. As stated by Liu et al. (2019), despite tremendous progress, the empirical and descriptive analysis of certain methodologies, tactics, and projects continue to

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predominate the literature on sustainability inclusion and reporting in global HEI. As per the case study, it has been observed that different organisational cultures play a vital role in changing society by providing education to the young generation. That is why, HEI resembles an engine (an innovation centre) still, it can be said that teaching along with learning, executing research, and obtaining knowledge. As per the views of Hosier and Hoolash (2019), for the organisation in India, a significant role in constructing a path through creativity and renovation along with a strong desire to embrace current processes in a group. At the centre of the study, research, and lastly expansion events, which can interpret some principles into proper processes, escalating consciousness, and duty of SD must be considered as starting. According to Sharma (2020), This group can reduce the influence on Seminar and Research process which support the research and academic activities. As stated by Waller et al. (2020), handling these challenges needs a critical thought process, new and innovative techs, and an open relationship among the science of this matter, this industry, and its respective society. Additionally, by mixing these academic efforts to enhance the condition of this community, society can play a prominent and major role that can assist not only in embracing, but also in showing sustainable variations of manufacturing and consumption. On the other hand, Sinjumasak and Mhunpiew (2022) mentioned that to provide some encouragement to this society, to know some prominent part of SD can be taken as a device that can enhance and improve the standard of life of this group. As mentioned by Waller et al. (2020), this is why a comparison of HEI can involve SD that majorly depends on numerous studies and can help build an adequate vision, and can show a significant attempt to create an apt and improved future. This case study tries to share some insights into building this kind of vision. These strategies, related schemes, and plans of action can possibly draw out some prominent learnings that can help the successful implementation of long-prevailing values that is the SV in other organisations. This study paper begins by depicting the methodology along with the institutional structure to implement long-remaining tactics. As opined by outcomes and seeking are then depicted and evaluated, in this organization's aim. As opined by Liu et al. (2019), from the evaluations of the overall structure and outcomes, principles that lie behind these implementations of long prevailing tactics of this case study are depicted. The

case study ends through the listing of some proper and effective conclusions.

Objectives of the Study

- The objective of the study is that sustainable development can be referred to as the biggest societal challenge in this present era.
- These strategies, related schemes, and plans of action can possibly draw out some prominent learnings that can help in the successful implementation.
- The main activities, planning, campus layout and construction, new infrastructures are interlinked with purchase process, rules and regulation etc.
- The present methods include maintainability as a troublesome theme of their work in response to this social dilemma. Several declarations, charters, and partnerships, all of which have offered frameworks and principles for integrating with the sustainability of institutions.

Methodology of Our Study

The methodology of our studies in HEI will be transformed completely both structurally and fundamentally after the successful adoption of sustainability aspects in the HEI system. Furthermore, with the help of the three dimensions, the organic behaviour and transformation can be analysed thoroughly (Jansen, 2003). Furthermore, to evaluate that all the sustainable practices are being implemented in the day-to-day life and decisions, a conjunction effort will be required between the indicators that would measure the systematic approach taken. Further, the detailed analysis that would be undertaken would be in chronological order and is very sensitive, as it would monitor the changes with the help of various indicators (Adams et al., 2018). This is a research paper based on the case study. The methodology section of a case study can be considered as very important when asking inquisitive questions. These questions would help the researcher understand the difference between the context and the phenomenon. As per the views of Yin (2013), it is especially helpful when the difference between context and phenomenon is unclear. As opined by Yin (2010), a case study can be single or multiple; it goes on to describe that in terms of one single case study, the case to be studied must be unique and should be relevant to all the individuals. Furthermore,

HEI in India is planning to implement sustainability indicators to measure the sustenance in the transportation area. In addition, due to the vision and the work of the HEI, a suitable case study is developed that has gotten international attention and recognition. Furthermore, the study aims to address various aspects as follows:

As mentioned in Fig. 1, the governance of the university is fundamentally based on decentralising, participating, and democracy, as well as the ‘*General Council*’ headed by the head of the financial board. These top management individuals are responsible for managing and controlling the full system of the university.

Study Conducted/Collection of Information

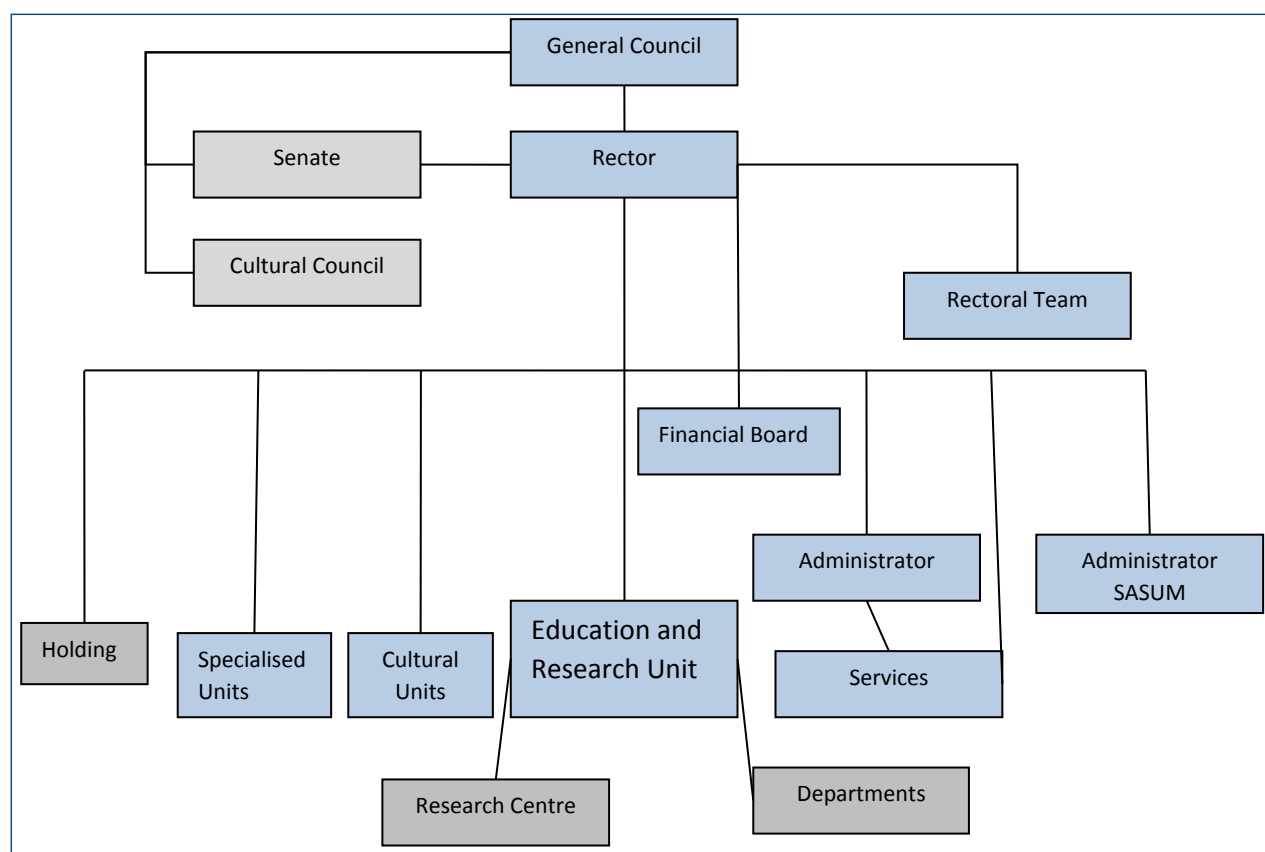


Fig. 1: Block Diagram of General Council and Cultural Council

The block diagram of the general council and cultural council is shown in Fig. 1. Furthermore, academic senate and the cultural council represent the consultation bodies of the university. These bodies are responsible for advising the rector as well as the general council on performance of duties and issuing alternative options relating to the current status quo. These bodies can be differentiated according to their responsibilities, frameworks, degree of autonomy, and their nature. In addition, there are various units responsible – these are the research units, cultural units, service units, and teaching units. As per the views of Sattiraju (2022), these units manage and thus

have managing departments and personnel via whom the university can assure the university mission. In addition, the university consists of teaching units and various research units, which further have three institutions and eight schools for humanities, arts, architecture, nursing, psychology, political science, physics, social sciences, and arts. In addition, the key service units are the academic divisions, services, audits, and the control divisions and control office. It also consists of the human resource department, information system department, legal department, library services, technical divisions, office for engineering, and the plumbing department.

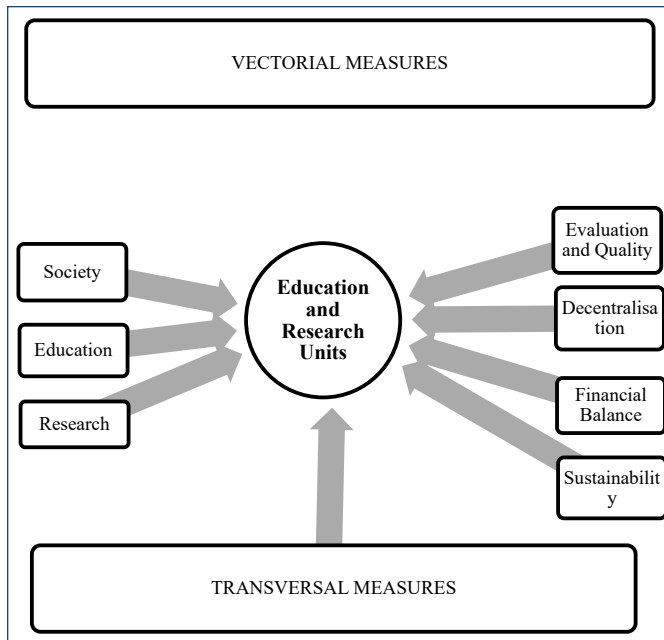


Fig. 2: Block Diagram of Vectorial Measures

The block diagram of vectorial measures is shown in Fig. 2. Furthermore, the mission of the university aims to mobilise and correspond to all the key functional areas. In addition, the support vectors from V4 to V7 shall include all the vectors that aim to improve the overall organisational environment. The vector can help in the assumption of sustainable practices and options that are aimed at following the adaptation process of sustainable criteria and practices, with a positive impact on the reference regarding the ‘campy life’, which is a part of the implemented policies by the university, authority, teaching staff, researchers, and students (UMinho, 2009). These mentioned practices were previously used by the Technical University of Calcutta; higher priority has been given to optimisation of the process for improving the practices. To make the vectors empowered and for its support, to make the operationalisation ensure some measures have been taken. The proposed measures are as follows – developing a sustainable culture; promoting sustainable mobilisation; and committing to enhancing the efficiency of energy (Ferrer-Balas et al., 2009). The wellness increasing in quality maintenance process related to environment. This practice also consists of the process of digital application and paper works. The inclusion associated with sustainable values and steps as its strategic vectors generally follows the ‘top-down approach’ generated by the rectorate, which proposes the transversal perspectives for academia. The mentioned practices generally start as a centralised intervention to

demonstrate engagement in the associated rectorate, which consists of new behaviours for the stakeholders. This process of decentralising initiates the aggregation and supporting factors into any large projects. At the end of this process, the outcome of implementation proposed to the first one can be maintained for sustainability and to reach at the goal.

Data Analysis

Supportability turns out to be considerably more compelling, as announced by the creation of a position for Favourable Minister for “Foundations and Maintainability”, which is answerable to the administration of the money growth strategy, the coordination of manageable approaches, and proceeding with the working circumstances and personal satisfaction at UMinho’s camps. This choice addressed, according to the hierarchical perspective, an institutional responsibility. The topic of maintainability was put forward at the most elevated level in the college, to some degree, as an acknowledgment of past outcomes. This activity plan was more extensive; it processed the measures in the space of well-being and security, and new foundations considering manageability arrangements and activities. The characterised targets were pointed, at the same time, to foster an implicit, and based on the methodology for education, supporting research in the space of manageability and esteem information. The advancement of these vectors assumed the consistent variation of frameworks along with the “dynamic improvement of the administrations”, which rely on the “Supporting Vector V8 – Live”, chipping away at grounds, further developing foundation and administrations. This essential structure requires a general coordination:

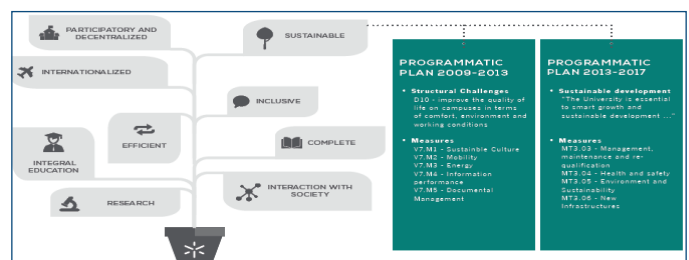


Fig. 3: Strategic and Programmatic Plan

From Fig. 3’s strategic and programmatic plan, the measures regarding the programmatic plan can be assumed. The steps planned for this mission can contribute to the planning for the promotion of an ‘inclusive and complete international institution’, without having to

compromise its efficiency. At the end of the governance, the model becomes decentralised. The first plans in this programme are associated with the enhancement of its quality based on working conditions, comfort, and environment. In the case of the second plan, the proposed ambition and scope towards the sustainability of the university may grow to handle the global challenges.

Interpretation of Results

Table 1: Sustainable Reporting Indicators (2022)

Dimension		Group Indicators	Area of Responsibility
Economic		Economic Performance (EC1, EC2, EC3, EC4)	Administration
		Market Presence (EC5, EC6)	
		Indirect Economic Impacts (EC7, EC8)	
		Procurement Practices (EC9)	
Environment		Materials (EN1, EN2)	Technical Services
		Energy (EN3, EN4, EN5, EN6, EN7)	Technical Services
		Water (EN8, EN9, EN10)	Technical Services, Schools and Departments
		Emissions (EN15, EN16, EN17, EN18, EN19, EN20, EN21)	Technical Services, Schools and Departments
Social	Labour Practices	Effluents and Waste (EN22, EN23, EN24, EN25, EN26)	Technical Services, Schools and Departments
		Student Body (CD1, CD2, CD3, CD4, CD5, CD6, CD7)	Academic Services
		Employment (LA1, LA2, LA3)	Human Resources Department
		Health and safety at Work (LA5, LA6, LA7, LA8)	Human Resources Department
		Occupational Health and Safety (LA9, LA10, LA11)	Office for Inclusion, Social Services
		Training and Education (LA12)	
		Diversity and Equal Opportunity (LA13)	
		Labour Practices Grievance Mechanisms (LA16)	
	Human Rights	Investment (HR1, HR2)	Social Services, General Council, Quality Assurance Services
		Non-discrimination (HR3)	
	Society	Local Communities (SO1, SO2, SO3)	Rectorate
		Anti-corruption (SO4, SO5)	
Cultural		Events (CL1)	Quality Assurance Services, Cultural Council, Social Services
		Events Distribution (CL2)	

Findings Revealed from Our Study

The introduction and adoption of two action plans and the relevant outcomes provide the answer or result of the research question. The questions are: how sustainability activities are implemented and what are its results or outcomes. In addition to these, the study also tried to understand how behavioural changes have been promoted and what the ‘top-down and bottom-up approaches’ were.

Education

The current commitment towards sustainability is among the outcomes of the institutional mission and its culture of responsibility. The goal towards promoting sustainability thoroughly reflects what and how a particular thing is being disciplined and what its identity marks are in terms of the academic community. In 2016 and 17, the first most “transversal course unit” based on sustainable

development was introduced. This was an academic course been started by the School of Economics and Management, Engineering, Science, as well as the Social Science Institute, for sharing the multi-disciplinary and the holistic dimension of sustainability.

Research

The most vital measure, which is highly relevant to the research, was the introduction of the Institute of Science and Innovation in 2017, promoting bio-sustainability (IB-S). This project was initiated in 2012, reflecting the investment of seven million euros and above, comprising the two latest buildings – the Campy of Guitar and Azurem. There are several multi-disciplinary rewards based on sustainability, which are progressing, while driving the forces behind the research based on sustainability. Thus, it can be said that this project promotes integrated researchers along with the new innovative solutions addressing the challenges faced by the society. The creation of this project with academic values is highly recognised by the Rectorate, indicating the need for enhancement of the research areas in terms of sustainability. The project IB-S in 2018 had hosted 15 sub-projects under it in areas of “marine resources, water management, wildfires, aquatic ecosystem, change in climate and construction, sustainable materials along with recovery of bio-waste, enhancement of green products, and relevant processes for its production in the agro food sector”, and many other similar fields.

Culture

Along with the traditional indicators of the ‘heritage and intense cultural dynamics’, cultural performance indicators have been added in the report, based on the sustainability in 2012. A wide range of campus events are also present in terms of these indicators, such as sports, exhibition of arts, musical shows, and concerts, as well as certain conferences. Many of these events were even promoted by the ‘Rectorate, the Department of Social Services (SASUM), and the Department of Music and Art Performances’. In terms of ‘performance of music and arts’, most of the participants were graduates and undergraduates. The rector was directly involved in conferring dimension and critical mass in terms of those initiatives that were self-sustained.

Social

Social actions were greatly managed with high sensitivity, mainly in the areas of policies promoted under anti-discrimination and social support. A report has shown that about 21,890 scholarships were provided between 2014-2017; more than 650,000 meals were served every year, in which 68 per cent was subsidised. About 1,399 beds were available in the residences of the universities with 63 per cent vacancies of seats for the scholarship students, along with other relevant social activities.

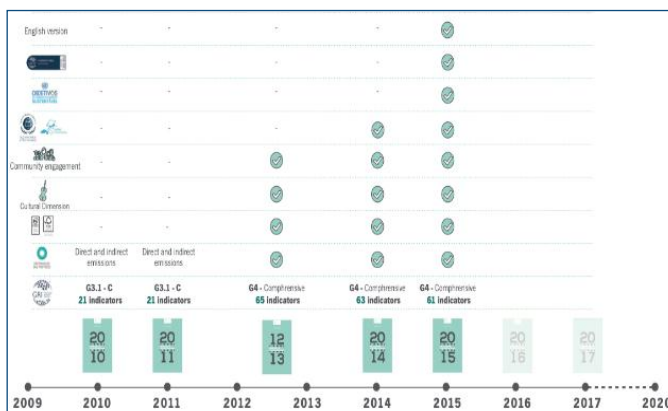


Fig. 4: Overview of Important Indicators Evolution (2014-2022)

Along with the savings, the project and its events had introduced several behavioural changes, which led to an increase in awareness and responsibilities of the individuals across the nation. This further contributed to the adoption and implementation of new policies and practices, relevant to the ‘values and concerns promoting sustainability’, scaling the whole procedure upward.

Conclusion

The conclusion of the study is that maintainability can be considered as a conclusive new logical field, which spotlights on world difficulties; along with the ways, such difficulties ought to be tended. Because of their set of experiences, missions, and targets, HEI has a commitment to lead development and add to a worldview change. Furthermore, they join all elements of SD, and have the obligation to make a move. This addresses a verifiable test to all HEI, free of their area, to incite the required change, from neighbourhood to a worldwide level. The research work examines the obligation of HEI towards

supportability and, considering the examples gained from the execution of a manageability methodology, presents the arrangement of standards considered for this situation study. The main rule is the definition and foundation of a stirred base up and hierarchical administration model. Manageable strategies should be driven at the most elevated authoritative level, offering help and contribution of the local area. This foundation shows the degree of obligation as well as guarantees that all choices will be carried out more productively, upgrading the essential change, not just according to the perspective of culture and ways of behaving, but additionally, to antagonistic natural resistances. The second standard comprises in ensuring the crossover nature of the maintainability values all through the foundation. According to the hierarchical perspective, a maintainability office ought to introduce itself as cross-sectional help to all mission regions, permitting an exceptionally impressive, pertinent, and key connection to the growth strategy, which unites and supports the foundation’s way in the space of manageability.

Suggestions

The suggestions of the researcher for productivity of assets utilization that has been enormously utilized in “HEI, specifically water, paper, and ink cartridges”. While executing these ventures, it is important to have an exceptional, as well as a general structure, cross-over to the local area, from a hierarchical point of view. The utilisation of an observing and specialised device is laid out as the fourth guideline; it tends to be founded on the annual distribution of an ‘institutional reasonable report’. The ‘non-monetary administration device’, joined with other more irregular specialised techniques, considers a report and examination of the foundation completely. The detailed exhibition markers, in the monetary, social, ecological, and social aspects, are under a universally acknowledged benchmark. The worldwide detailing drive rules likewise act as the main thrust for persistent improvement.

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