



Research Article

SUSTAINABILITY IN HIGHER EDUCATION: PERSPECTIVES AND CHALLENGES

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ARTICLE INFO

Article History:

Received 4<sup>th</sup> February, 2023

Received in revised form 25<sup>th</sup>

March, 2023

Accepted 23<sup>rd</sup> April, 2022

Published online 28<sup>th</sup> May, 2023

Key words:

Education for Sustainable Development (ESD); Sustainable development Goals (SDGs); Conceptualizing Sustainability; Challenges for Sustainability in HEI; Perspectives of Sustainability in HEI.

ABSTRACT

Higher education institution's (HEIs) sustainability develop a mindset that promotes the SDGs' guiding principles. ABC strategy is adopted for sustainability. The majority of sustainable development policy is developed at the faculty and university levels. Two types of sustainability exist, namely, internal sustainability and external sustainability at the university. Integration of competencies in sustainable development takes place at three levels – vertically, horizontally or through a combination of both. Interdisciplinary research is necessary in the various domains of knowledge in order to properly execute and adopt the SDGs. The challenges for sustainability are lack of guidelines for identifying and training ESD and lack of standards for evaluating ESD proficiency among others. Thus, it is now widely understood that higher education can hasten the shift to a well-grounded present and future.

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INTRODUCTION

HEIs are essential to sustainability. They educate aspiring leaders to help the Sustainable Development Goals (SDGs) of the UN be implemented successfully (Zaleniene and Pereira, 2021). Higher Education Institutions that are dedicated to sustainability foster a mindset that upholds the SDGs. The International Association of Universities' Kyoto Declaration (1993) requires that institutions foster and advance the notions and ideals of sustainable development (Hilligje and Frederique, 2017). Under Key Policy Area 2: Changing Educational setting, IAU collaborates with the GAP Important Partners. More emphasis is placed on perception and advancing integral establishment perspectives to ESD by partners in this activity area. Incorporating sustainability into higher education's curriculum, governance, research, teaching and learning, as well as operations, requires active participation from the stakeholders.

Education for Sustainable Development

Instruction is the secret to sustainable living (Yasin and Rahman, 2011). Incorporating sustainable practices into education and fostering future economic viability were the two main objectives of the United Nations Decade of Education for Sustainable Development (2005–2014). (Zaleniene and Pereira, 2021). This effort was necessary to promote sustainability education globally and at all levels. Education for sustainability, legal obligations for sustainability,

sustainability in learning, reasoning, and active learning are the major improvements to this strategy. According to Zaleniene and Pereira (2021) the SDGs can only be achieved by achieving quality education (Goal 4). The majority of SDG-related themes are addressed through campus activities, operations, research, and education.

Sustainability's Importance for Higher Education (Veidemane, 2022) is:

1. The Priorities of World and Eurocentric Policy in ESD
2. University Sustainability Rankings, and
3. ESD through time

ESD is described as "the process of learning the knowledge, skills, and attitudes needed to construct local and global communities that are just, equitable, and living within the environmental boundaries of our planet, both now and in the future" by the Sustainable Development Education Network (Environmental Association for Universities and Colleges, 2013).

Following are the main factors (Veidemane, 2022) that determine whether education is ESD- or SDG-related:

1. Material that addresses complicated issues from economic, environmental, and social angles.
2. The necessity of the ESD approach's action-oriented teaching strategies.

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### 3. SDG viewpoints in a certain field.

To encourage and prepare students to make decisions that are in the best interests of sustainability, education for sustainable development (ESD) incorporates the directive of sustainability through teaching and learning concourses (Treichsel *et. al.*, 2018 and Hoque, *et. al.*, 2022).

#### **Perspectives of Developing Sustainability in Higher Education**

According to Hilligje and Frederique (2017) in 2016, the International Association of Universities adopted an <ABC> Approach for Higher Education and Research for Sustainable Development (HESD) focusing on:

1. Apprising & supporting
2. Building solidarity & networking
3. Conversing & convening

Regional predictions for risk evaluation due to meteorological events and advising farmers on adaptation to climate change. All universities participate, and several academic members write for the Intergovernmental Panel on Climate Change (IPCC). Both regional and national governments get advice, and climate research and education play a significant role (Hilligje and Frederique, 2017).

Agenda 2030, "aims to build a more just and sustainable world through strengthening ESD and contributing to the achievement of the 17 SDGs" (UNESCO, 2020).

This is a discussion of how HEIs around the world have contributed to various SDGs (Hilligje and Frederique, 2017).

1. More than 250 academics, students, and members of the university administration participated in the think tank "Transition UGent" to identify goals and measures for Ghent University's sustainability policy (Belgium). The project focuses on nine areas: water, art, education, research, nature and the environment, energy, food, trash, transportation, and waste.
2. More than 150 student volunteers and staff members participated in Assam Don Bosco University's (India) 2013 "Swastyayan...A Commitment" programme. The project's main objective is to provide poor kids with tutoring programmes tailored to their academic requirements. These programmes cover a variety of topics, including soft skills instruction, career guidance, and the development of personality, in addition to teaching disciplines like mathematics, general sciences, social sciences, and English. More than 200 kids from the University's neighbourhood now benefit from Swastyayan programmes. Another initiative that was started in 2014, "Swabalamban," intends to give technical skills to young people in the neighbourhoods surrounding the university campus to boost their employability and make them self-employed.

The majority of sustainable development policy is developed at the faculty and university levels. The majority of faculty departments, sustainability centres, and student organisations then develop and register sustainable development initiatives (Hilligje and Frederique, 2017).

According to Hilligje and Frederique (2017) the institution's professional development programmes for sustainable

development are evaluated to support teaching and learning with a focus on student development. The Sustainable Literacy Test is one such instrument (Sulitest).

HEIs collaborate to advance sustainable development on a global, regional, national, and local scale (Hilligje and Frederique, 2017). HESI (Higher Education Sustainability Initiative), Copernicus Alliance (UN Partnerships for SDG platform), MESA (Manufacturing Enterprise Solutions Association), ISCN (International Systems for Human Cytogenetic Nomenclature), SDSN (Sustainable Development Solutions Network), and no other involvement constitute the institution's participation in other networks for sustainability in HEIs.

According to Hilligje and Frederique (2017), universities are implementing sustainable development, even at the strategic level. Nonetheless, there is still potential for improvement. Hence, sustainability initiatives are a component of the institution's overall strategy. In addition to student organizations, these projects are largely formed in faculties, departments, and sustainability centres.

Sustainable Development Goals (SDGs) in Higher Education are:

1. How crucial higher education is to sustainability.
2. The significance of accurately and clearly communicating sustainability-related issues.
3. Higher education institutions are crucial for communicating sustainability (Zaleniene and Pereira, 2021) in an effective way for the following three reasons:
4. Many people attend universities and colleges despite the various inequities. In higher education institutions worldwide in 2016, there were about 216 million students enrolled.
5. The majority of college students are between the ages of 18 and 21, which is an important time for identity development.
6. A college or HEI is frequently a finale of schooling prior to joining the workforce, where professionals take on a vital role.

#### **Research Areas – HESD**

According to Lim, *et. al.*, (2022) the HESD research fields and subfields are:

1. SD Local and Global Studies accomplishments.
2. Students' awareness, internal community awareness, and internal and external community commitment.
3. Evaluation and commentary: Tool development, Sustainability commentary, and Sustainability evaluation.
4. Implementing policy is structural transformation.
5. Cross-disciplinary, inter-disciplinary, multidisciplinary, trans-disciplinary, creation, and other relevant course coordination.
6. University management: Changes in behaviour and institutional structures, as well as carbon footprint.

There is agreement over the significant research, curricula, outreach programs, universities collaboration with the efforts of ESD (Lozano *et.al.*, 2013).

According to Fernandez-Sanchez, *et. al.*, (2014), internal sustainability (connected to workspace, research, and

institutional set up) and external sustainability (community programs and evaluation and publishing) are two categories of sustainability at the university.

### **Conceptualising Sustainability in Key HE Functions**

All essential components of higher education can incorporate sustainability. To embed sustainability in HEIs, the United Nations recommendations recommend a holistic, integrative approach. Such an approach frequently separates six main dimensions, (Caeiro, *et. al.*, 2020, Cortese, 2003 and Lozano, 2006) whose formulation varies slightly:

1. education (teaching and curriculum),
2. research,
3. community engagement (within and outside community),
4. campus workspace (establishment and business)
5. institutional management (administration and trusteeship), and
6. appraisal and reporting (appraisal, documentation, and surveillance).

### **Higher Education Sustainability Integration: Methods**

There are several ways to include sustainability in collegiate settings. The poll's findings are listed below (particular to each discipline or more interdisciplinary and cross-cutting).

The integration of competencies for SD can be accomplished in one of three ways, according to Fernandez-Sanchez *et al.* (2014): via a combined integration, where aspects of both transversely and particularly SD competences are incorporated. Vertically, where SD elements are integrated as a major skill or course; Horizontally, where SD elements are implicitly integrated in all competencies. The ESD integration process includes the following steps:

1. Develop a definition of SD at the institutional level (typically), the faculty level, and the school level (specific definition).
2. Include sustainable standards in all the university's activities in the selected domains.
3. An explanation of general and specialized SD knowledge, skills, and values.
4. Develop innovative educational goals and teaching techniques to change interdisciplinary, project- and problem-based learning, self-regulated learning, tactics, and action- and research-based methodologies in teaching and learning.
5. Define skill acquisition thresholds and plan skill growth. The sustainability-related knowledge requirements for graduates must be met.
6. Recognize how crucial it is to instruct and direct students through feed-back, feed-forward, and feed-up.
7. Encourage a culture of advancement throughout the entire university (education as central area).

### **Inclusion**

HEIs across world are becoming more conscious of the concerns surrounding sustainable development and the role they play. They regularly narrate on their sustainability efforts and encourage increased participation within their organization to ensure that everybody takes part (Hilligje and Frederique, 2017).

### **Curriculum**

Regarding disciplinary methods (the how: disciplinary, transdisciplinary, or both?), construction (who: a particular instructor, a faculty or department, the institution, or a combination of these?), and magnitude, HEIs address the topics related to various sustainable development goals, according to Hilligje and Frederique (2017).

Institutional support must consider its goals for the university's mission and vision, each school and faculty, and the graduate attribute statements (Lee, Barker & Mouasher, 2013).

The purpose was to better understand how specific teachers, researchers, and administrators operate. The "structural approach" inquiry seeks to understand whether the implementation of ESD is more of a faculty initiative, an individual endeavor, or something that the institutions take on. The "dimensions" inquiry seeks to ascertain whether ESD work has an impact on campus, operations, teaching, research, or other efforts (Hilligje and Frederique, 2017).

Another fundamental component of each academic degree's goals and programmes is the incorporation of information, skills, and values. Five critical competences were highlighted by Wiek, Withycombe, and Redman (2011): complex reasoning, anticipatory skills, normative skills, strategic skills, and interpersonal skills. Accountability, emotional empathy, system familiarization, future orientation, individual engagement, and proficiency were the six domains of competences that Roorda (2001) identified.

### **Assessment**

To monitor and promote development, this calls for notch and surveillance methods (Hilligje and Frederique, 2017).

### **Innovative Teaching**

By using an interactive, student-centered pedagogy and offering a whole-institution approach, ESD addresses these issues and enables students to "experience what they learn and learn what they live" (Hilligje and Frederique, 2017).

### **Challenges for Developing Sustainability in Higher Education**

The SDGs 1, 3, 5, 8, 12, 13, and 16 are covered by sustainability in HEIs, and they are to end poverty, ensure healthy living, ensure gender equality, provide decent work, promote responsible consumption, combat climate change, and promote peace, respectively. Being a transmuting force, universities have a substantial impact on learners' behaviors and beneficence to a successful community. Yet, non-consumptive concepts need to be at the core of HEIs' strategies (such as their curricula and operating procedures) and are crucial to be included into the organisational culture to establish the transformation in education that is necessary (Zalieniene and Pereira, 2021).

Interdisciplinary research is necessary in the various domains of knowledge in order to properly execute and adopt the SDGs. The blending of many academic fields enhances students' ability to solve problems and expands their thinking so they can come up with answers for various problems: 1) The undereducated audience, the illogical and poor teaching techniques, the lack of relevance in the courses, and the motivating crises; 2) audience with little knowledge of global crises like climate emergency; 3) Consumer habits influenced

by cultural differences and environmental credence; 4) Persons have their own perspective; 5) Not everyone has equal access to education and career possibilities. 6) A person's behaviour does not match their ideas.

ESD's vision and mission are collaborating to find fresh approaches to the problems we currently confront. But, it also seems that there are many networks, and they are all in competition for the same people and financial resources. It can be challenging for those who are active to determine which networks they should be a part of and which ones they should devote their complete attention to. The numerous sustainability networks that are already in place in higher education should collaborate more closely in order to avoid operating in silos and to be more effective.

In addition to the discrepancy between the evidence and the research, there is another issue. Universities cannot simply focus on the SDGs and mobilize the policy-making and means to fulfil them since they are not a straightforward, unanimous conglomeration (Chankseliani & McCowan, 2021).

According to Veidemane (2022) the principal challenges are:

1. There are no guidelines for identifying schooling that adheres to ESD requirements.
2. Little capacity to compare the global workload of schooling.
3. There are no guidelines for identifying training that adheres to ESD regulations.
4. There isn't much room for comparison of the global training effort.
5. Inadequate ability to understand how early teacher preparation relates to the ESD plan.
6. A lack of standards for determining what constitutes ESD-compliant schooling.
7. Little capacity to compare the global workload of education.
8. There are no standards for evaluating ESD proficiency.
9. A lack of standards for identifying professions involving SD.

Other challenges according to Fernandez-Sanchez, *et. al.*, (2014) include:

1. The necessity of strong leadership, financial incentives, educational resources, and information needed to implement sustainability in universities. Biggest challenge is lack of funding, motivation, and support of university administrators.
2. Important factors for putting a sustainability plan into action include teacher preparation programmes and the need to make ESD more apparent inside university degrees and departments.
3. Neither the current nor the suggested methodological declarations provide operational-level specifications on what colleges should do to support SD.

## CONCLUSION

Through funding higher education, the 2030 Agenda for Sustainable Development may be partially accomplished. Each Objective is supported, and it creates the next generation of leaders. The transition to a more sustainable present and future is now widely accepted to be accelerated by higher education (Hilligje and Frederique, 2017). In order to

encourage participation from more institutions and support the development of institutional approaches to sustainability among its Members, the International Association of Universities (IAU) also promises to keep highlighting inspiring sustainability initiatives being carried out by universities around the world. Here are the concerns we face:

1. How should a higher education institution establish, carry out, and track a strategic plan for sustainable development?
2. How can sustainable development be fully incorporated into the curricula?

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**How to cite this article:**

Ramakrishna Avvaru and Ramadevi Narayana (2023) 'Sustainability in Higher Education: Perspectives and Challenges ', *International Journal of Current Advanced Research*, 12(05), pp. 1995-1999.  
DOI: <http://dx.doi.org/10.24327/ijcar.2023.1999.1437>

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