

AN EXAMINATION OF SUSTAINABILITY FOR EDUCATIONAL INSTITUTIONS

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ABSTRACT

With the goal of assessing the effectiveness and impact of various implementation dimensions measuring and evaluating how sustainability is applied in practise, this Special Issue, "Sustainability Assessment in Higher Education Institutions," provides peer-reviewed research from various geographic locations and institutions. There are nine publications in this field of study, which include topics such as sustainability education, interdisciplinary teaching methods that incorporate sustainability, sustainable assessment, governance strategies and practises, and social responsibility at higher education institutions.

Keywords: education for sustainable development; higher education institutions; commitments; practices

I. Introduction

When it comes to contributing to a more sustainable society, universities and other higher education institutions (HEIs) have a particularly significant role to play. From teaching and curriculum, campus operations, administration of the external community as well as research into sustainability, these institutions may undertake sustainable development in a variety of ways. A holistic/integrated method known as the "Whole-School Approach" by the United Nations Educational, Scientific, and Cultural Organization (UNESCO, Paris, France) is ideal for various implementations. Measuring and assessing the efficacy and impact of the various implementation factors enables an assessment of how sustainability is applied in practise and the identification of weak points, strengths, and improvements required.

It is our hope that this Special Issue on Sustainability Assessment in Higher Education Institutions would facilitate the exchange of ideas and spark new approaches. Nine pieces from the United States, China, Taiwan, and Europe are included in this compilation (Portugal, Spain, Germany, and Slovakia). For those interested in learning more about the latest developments in sustainability education research and theoretical debates at colleges and universities can be found on a wide range of topics such as students' attitudes toward environmental issues and the role of sustainability education in society as a whole.

For your convenience, we've compiled a quick synopsis of each piece, arranged chronologically by date of approval. Toquero, 2020 conducted a survey of undergraduate students and faculty members at a university in the United States on their attitudes toward sustainability education. Various degrees of sustainability knowledge were found among students and teachers, as well as hurdles to developing integrative sustainability courses across fields. Denial of personal responsibility was seen as a typical characteristic in dealing with sustainability issues.

As part of the study, researchers looked at how the graded indexes' sustainability factors were related to each other and to the institutions' research output and government efforts (Adams, & Larrinaga, 2019). They stated that for the long-term viability of universities, there must be an increased emphasis on government-supported research, stable financing, and more methods to use international initiatives, allowing exceptional educational programmes and thorough internationalisation. Although the writers criticised and cautioned the indicators utilised, the institutions being examined and the diversity of aspects to draw comparisons using ranking indices, they did so in a way that was clear and concise.

II. Literature Review

Several research presented in the literature on sustainability education are helpful in incorporating sustainability into the lessons. There has been much discussion about how important it is to evaluate sustainability on campus, but previous studies have failed either in identifying an exact method of evaluation or in taking into consideration the broader context of sustainability knowledge. As a result of this, the literature suggests more study into subjects and majors that have traditionally been considered peripheral to sustainability education, such as economics, psychology, and anthropology. European higher education institutions have conducted an extensive research that examined the link between various educational techniques and learning outcomes or skills (Kostetska, *et al.* 2020). A review of the competencies showed that none of them addressed sustainability in any of its three facets (economic, social, or environmental). Literature has identified internal obstacles that prevent universities from integrating sustainability. These include financial constraints, lack of understanding and awareness of sustainability; resistance to change; and difficulty achieving "coherent institutional approach" in which the operations of the institution are integrated with the teaching and research of the institution. In the literature, there are several examples of academic silos thwarting the incorporation of sustainability. A lack of "epistemological pluralism and reflexivity," according to Leicht, *et al.* 2018, is preventing academic institutions from producing knowledge that is "socially robust, recognises system complexity and uncertainty, acknowledges multiple ways of knowing and incorporates normative and ethical premises," according to Li, *et al.* 2018. It has been said that the most pernicious impediment academics face is specialisation, which isolates professors and "prevents the systems-level integration essential to entrench sustainability."

III. Materials and Methods

Qualitative approaches were chosen for data collection and analysis since quantitative data on Cal Poly students and faculty sustainability awareness was lacking. A series of open-ended questions were produced to guide the interview process, although they might be asked in a certain order or in a specific style. The purpose of the interviews was to determine how well each participant understood and practised sustainability as a learning aim across disciplines, as well as to identify any obstacles that could stand in the way of effectively teaching sustainability across the curriculum. Interviewees came from six different colleges at Cal Poly: agricultural, architectural design, business, engineering, liberal arts, as well as science and math. Extra credit for participation was offered to students enrolled in big general education (GE) classes from a number of areas. Courses with over 125 students and students from various academic fields were included in the selection of big GE courses. Four of these courses had recruitment announcements. It was decided to target the third and fourth year students as they had greater classroom experience (Mahdi, Nassar, & Almsafir, 2019). Depending on the sort of data the researcher

seeks to gather, there are a variety of qualitative data collecting techniques for conducting interviews. Purposive interview sampling was utilised in this study since it has been shown to be an effective strategy for capturing empirical connections between various sets of data. Qualitative research has indicated that sample size is less significant when participants have personal experience with the project issue, when small numbers of participants are investigated intensely, and when the kind of participants are deliberately selected. There are no predetermined hypotheses to test in this study, and the chosen approach does not try to derive statistical significance in order to test any of these hypotheses. More over ten hours of recorded transcripts from the semi-structured interviews yielded enough information for the study's objective despite a small sample size for both students and professors.

Rieckmann, 2018, examined the social performance of HEIs in terms of how they fulfil their duties as social institutions. According to the authors, HEIs have recently been interested in social issues such as responsible management, plan execution, and leadership, as well as outcomes measurement. According to the authors, the scientific discourse and reporting is dominated by ecological sustainability, whereas social performance plays a minimal role. In addition, the sustainability evaluation instruments currently in use at HEIs do not accurately reflect this performance (Prakash, 2018). Due to the fact that higher education institutions' core missions are heavily focused on research and teaching and have not paid attention to requests from outside the institution as a whole, more study in this area is needed going forward.

Journal of Joint Justice aims to critique the available instruments to analyse and benchmark the implementation of education for sustainable development in higher educational institutions and to debate their relevance in two case studies in Portugal and Spain. HEI's external impact on sustainability, participatory processes, and nontraditional aspects of sustainability should all be considered as part of the assessment tools' development, according to the authors, who concluded that defining a common objective and making continuous improvements to the tools' development is necessary.

A summary of the current research in the area of "Sustainability Assessment in Higher Education Institutions" concludes this Special Issue, which presents an overview of ongoing research on new and holistic strategies, collaborative learning, personal responsibility and long-term performance assessment for sustainability implementation in higher education institutions (inside and outside impact). There is still a long way to go, but HEIs are making progress.

IV. Results

All participants' replies to the introduction questions "How do you assess your own understanding of sustainability?" and "How do you define sustainability?" were examined and analysed to determine their degree of sustainability knowledge. Phased readings and researcher congruence were used to identify whether participants had a high or low degree of sustainability knowledge. According to the Brundtland Commission, sustainable development means "meeting the needs of the present without compromising the ability of future generations to meet their needs," and other definitions such as the "three Es" (Environment, Equitability, and Efficiency) were also cited by researchers. When it came to connecting with commonly accepted meanings, people with a lot of expertise had a low bar to clear. Anyone who talked about sustainability in a broad sense was graded highly. High knowledge replies are multistructural, relational, or extended abstract assertions, while low

knowledge responses are prestructural or unistructural [38]. Those who responded to the question "How do you describe sustainability?" with general or larger detail, reflecting an expansive or complete perspective, were categorised as "high" respondents.

V. Discussion

Interdisciplinary and non-siloed techniques are essential to the introduction of sustainability science into the curriculum. However, it is less clear how disciplines function together as a system to provide a long-term curriculum. These findings show that the growth of a multidisciplinary sustainability curriculum is hampered by inadequacies in the higher education system. This study's findings show that students and professors with greater sustainability awareness are more likely to see obstacles to institutional responsibility (Findler, *et al.* 2018). The findings of a previous study, which revealed that an institution's internal norms and setting may influence people's behaviour and decision-making processes, corroborate this element. Solutions will need a holistic approach to include sustainability into their basic beliefs, which is particularly crucial for the creation of solutions. There are a number of institutional mechanisms in place at Cal Poly, including the formulation of sustainability learning objectives for all students who graduate. It is critical to determine if institutional actions are in line with the actual obstacles that need to be overcome.

VI. Conclusions

The need of multidisciplinary methods in sustainability education is well-known, but the specifics of how different disciplines function together as a system to contribute to a comprehensive sustainability curriculum remain obscure. These findings demonstrate Cal Poly's incapacity to expand an interdisciplinary sustainability programme that may connect with other institutions with comparable academic settings. It is clear from the lessons learned at Cal Poly that a curriculum focused on environmental stewardship requires a multifaceted approach. Expanding sustainability-related curriculum or programme efforts will be easier if hurdles at all levels, from the individual to the institutional, can be identified and overcome. According to research findings, students and faculty members from different backgrounds and disciplines face a variety of challenges to sustainability education. Participants with a greater level of sustainability knowledge tend to hold organisations accountable, whereas participants with a lower level of sustainability knowledge tend to hold themselves accountable for identifying impediments to sustainability education. This conclusion is a good representation of the mindset of students and professors who are in favour of environmental education. The findings also show that if a college or university wants to include sustainability education into its fundamental principles, it must first implement a comprehensive strategy to do so from the institutional level. The findings of this study show that both techniques will be necessary to overcome perceived implementation difficulties. Students, professors, and institutions might benefit from further research and knowledge of the barriers to sustainability education implementation.

VII. References

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