Part 2
International Education Issues

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Challenges Associated with Implementation of Sustainability-oriented Principles and Practices: Lessons Learnt from South African Universities

Abstract

As evident in scholarly literature, universities worldwide embrace Sustainable Development Goals initiated by United Nations. Yet, regardless institutions' commitment, many countries, especially developing ones, struggle to effectively implement sustainability-oriented principles and practices in higher education. To that end, this paper, based on the qualitative document analysis, brings attention to main challenges associated with the implementation of sustainability-orientated principles and practices in seven South African universities. The findings show that several challenges exist due to the holistic nature of sustainable development (SD) as it is a concept that not only connects different areas of knowledge but also articulates knowledge from distinctive disciplines. Furthermore, the findings indicate that the strategy with the most potential of enhancing the implementation of sustainability-orientated principles and practices and ensuring longevity and improvement require support from top management of higher education institutions (HEIs). In addition, in order to strengthen SD, HEIs need to adapt a holistic approach and implement sustainability principles, knowledge, and practices within all academic activities. In alignment with the theme of the conference, this study provides reflections and recommendations towards the improvement of education considering the experiences and lessons learnt in a specific context.

Keywords: sustainability, sustainable development, sustainable development goals, education for sustainable development, higher education in South Africa

Introduction

It is well known that countries globally are facing unprecedented challenges. As a response to the challenges of the 21st century, many countries have committed to *The 2030 Agenda for Sustainable Development* (United Nations, 2015) seeking to integrate development, peace, social justice, and human rights (Ferguson & Roofe, 2020). The

commitment of the UN member states creates opportunities for vulnerable citizens who face challenges such as conflicts, diseases, natural disasters and unstable political environments (Novo-Corti et al., 2018). The UN member states have identified education as a fundamental instrument that nations can employ towards the social, economic and environmental emancipation of countries (Novo-Corti et al., 2018). Although primary and secondary education has an important role to play towards the attainment of the Sustainable Development Goals (SDGs), the role of HEIs is critical since they provide the optimal setting and resources to promote SD. HEIs have shown considerable commitment towards sustainability through international dialogue, conferences, teaching and learning, research, strategic planning and signing of declarations (Farinha et al., 2020). Despite their commitment, South African (SA) HEIs still grapple with challenges associated with implementing sustainability-orientated principles and practices. Many challenges exist due to the holistic nature of SD as it is a concept that not only connects different areas of knowledge but articulates knowledge from distinctive disciplines. The effective implementation of education for sustainable development (ESD) has proved to have a positive impact on the sustainability consciousness of students (Novo-Corti et al., 2018). Thus, it is no surprise that scholarly literature has identified ESD as the method with the most potential to change the mentality of citizens and nurture sustainability-orientated principles and practices towards achieving a long-term goal of sustainability (Novo-Corti et al., 2018). However, in developing countries such as SA, ESD is in its initial stages and only starting to gain academic momentum, leaving HEIs vulnerable to challenges. At the heart of effectively implementing sustainability-orientated principles and practices is ESD, which is a lifelong learning process, aiming to instil skills, knowledge, attitudes and values that will enable students to live and work in a sustainable manner. UNESCO (2019) conceptualized SD as preparation for the future, where environmental, social, cultural and economic matters are balanced in the attempt to attain an improved quality of life. SD is viewed as a process aimed at achieving the long-term goal of sustainability.

This paper relies on a qualitative research employing document analysis method to identify challenges associated with the implementation of sustainability-orientated principles and practices in seven SA universities. The following sections illustrate seven main challenges and provide an explanation of the measures SA HEIs under investigation have taken as a response to these challenges. As per ethical clearance, the names of the HEIS are anonymous.

Main challenges with ESD implementation

Maximising the implementation of ESD requires the identification of specific challenges limiting such implementation. As evident from the findings, the challenges pertaining to the implementation of ESD are interrelated, thus one challenge affects the other. The challenges are many; however, this section zooms in on the main seven.

The first challenge is the poor conceptualization of terms associated with SD in HEIs, leading to a lack of holistic vision and integrated approaches towards innovation and sustainability (Avila et al., 2017). Sustainability is clearly defined by less than half of the seven SA HEIs, thus the majority of HEIs do not define and articulate sustainability well enough to make it easy to understand and then realize in practice. Although the environmental and social realms of sustainability are addressed adequately by the majority of HEIs, they are not addressed in a holistic, interconnected

and interdisciplinary manner. Poor understanding of the holistic and interdisciplinary nature of sustainability is leading to its poor implementation in core activities and policy in the SA context.

Absence of a holistic vision leads to the second challenge, namely, poor trans-disciplinary co-operation within HEIs, which leaves academics to work in isolation within their faculties and areas of specialization (Avila et al., 2017). Consequently, most initiatives involve campus environmental sustainability (e.g., saving electricity) instead of ESD (Takala & Korhonen-Yrjänheikki, 2019). One SA HEI noted that academic's working in isolation is problematic as it leads to too many individual initiatives deployed at the HEI with little to no direction. In the context of this institution, the HEI intends to avoid isolated efforts in their attempt to respond to societal challenges such as sustainability.

The third and arguably the biggest challenge hindering the effective implementation of ESD is the lack of support towards sustainable initiatives from senior management of HEIs (Rampasso et al., 2020). To that end, Mula et al. (2017) noted that sustainability-related initiatives in HEIs often rely on the attention and conviction of individual academics. When there is a lack of support from top management, ESD is viewed as an optional addition into the curriculum. There is little evidence that top management in SA HEIs actively support the implementation of ESD. However, top management of one SA HEI opened up opportunities for implementation of sustainability-orientated principles and practices by signing the United Nations Global Compact, which was incorporated into core activities.

The fourth challenge is grounded in the limited amount of multidisciplinary research working groups, committees and offices allocated towards sustainability in HEIs which stems from a lack of guidance from top management (Farinha et al., 2020). Having an individual (sustainability coordinator) and an office space to addresses concerns about sustainability provides decision making power and guidance (Avila et al., 2017). SA HEIs are committed to building on their established track-record of multidisciplinary research groups. The majority of SA HEIs have responded to the dynamic economic, social and environmental changes by employing an interdisciplinary approach to research, dialogue and teaching. The use of interdisciplinary and transdisciplinary approaches has been made urgent due to the emergence of Covid-19. Some SA HEIs have capitalised on the opportunity presented by Covid-19 to scale up their service role and employ an interdisciplinary and transdisciplinary approach to their core activities. In terms of working groups, one SA HEI has established a Sustainable Development Working Group with the objective to monitor and co-ordinate the SD projects at their institution. This action reveals that strategy adoption has been extended into actual implementation of strategy, from which other institutions can learn.

The lack of sustainability-related leadership from top management in HEIs leads also to the fifth challenge, specifically, poor implementation of sustainability-related commitments and policies (Farinha et al., 2020). Sustainability related policy and declarations are important towards the goal of ESD. However, although the signing of declarations and charters is an important driver for SD, it does not always lead to the implementation of their commitments. Currently, there is a lack of SD policies in the majority of the sampled SA HEIs.

The poor implementation of ESD related policies may negatively impact the curricula and research outputs of HEIs, which is the sixth challenge. As evident, HEIs

curriculum does not fully include and in some cases, totally disregards information about sustainability (Avila et al., 2017). Updating curriculum content and teaching materials is necessary in order to adapt to the dynamic nature of sustainability. SA HEIs ensures rigorous quality assurance of all academic programmes and courses. Curriculum content is continuously renewed, promoting multidisciplinary research and teaching initiatives to drive innovation with the aim of strengthening sustainability and increase societal impact. To this end, it is clear that SA HEIs incorporate sustainability-related content in their curriculums. However, the incorporation of SD content does not equate to ESD, as SD content is poorly specified and does not capture the holistic nature of SD.

Inadequate pedagogical approaches stem from a lack of professional development and teacher training, which is the last challenge (Feinstein et al., 2013). In SA, opportunities for lifelong learning through a variety of short courses to academics and other professionals are provided. Although efforts to professionally develop educators are promising in the context of SA, they are not linked to ESD professional development. Efforts to improve ESD in teacher education have made satisfactory progress as there is evidence of sound educational teaching practice, training and policy in SA HEIs. The concern is that not much has been done in terms of consistently incorporating ESD into SA teacher education.

Recommended strategies

This section provides an explanation of the lessons learnt from the institutional principles and practices employed in SA HEIs. Special attention is paid to the role of educational leaders in supporting teacher training and professional development, revising policy, adopting a whole-institution approach as well as interdisciplinary research and curriculum requirements. The discussion outlines six strategies that could maximise the implementation of sustainability-orientated principles and practices.

The first strategy, and the one with the most potential of scaling up the implementation of ESD and ensuring longevity and improvement, is support from top management of HEIs. In fact, the establishment and evolution of an ESD ideology require long-term commitment, time and continuous support from educational leaders. Thus, the development and adoption of an institutional strategy for SD needs to be supported by rectors, managers, and professors in order to sustain sustainability programmes and initiatives. The commitment and support of educational leaders to sustainability calls for articulation of ESD in strategic planning, the mission and vision statement and other relevant policies. For educational leaders to offer support and commitment in areas of priority and to catalyse effective transformation would require the provision of ESD-related training for individuals in leadership positions. Furthermore, educational leaders need to be aware of academics that may have a personal interest and motivation to engage in ESD; however, their engagement may be hindered by factors such as lack of time and financial resources. There are calls for educational leaders to allocate time and resources to the designing of new courses and the reviewing of existing courses, which will afford academics the opportunity to engage in ESD without increasing their workloads.

Management has one of the most important roles to play in scaling up the implementation of ESD. However, the role of educators is also crucial. The second strategy is endorsed by UNESCO (through their Global Action Programme), which is to improve the ability of educators to reorient their teaching practice towards ESD

through the provision of appropriate teacher training and professional development of staff. Professional development recognises that the need for lifelong learning, as change, is a constant feature of the 21st century. As per teacher training, scaling up the implementation of ESD at all levels of education (primary, secondary, and tertiary) will require teacher training programmes to embrace pedagogies that foster the competencies that enable teachers to serve as competent change agents.

Embracing ESD in professional development and teacher training programmes as well as throughout the core activities of HEIs should be articulated in policy, which accounts for a third recommended strategy. The purpose of sustainability policies is to encourage students to participate in SD dialogue, scholarly activities and initiatives, which is required due to the vast size and population of HEIs. Thus, SD dialogue, scholarly activities and initiatives should be enforced (through policy), as it is challenging to promote awareness amongst so many staff and students. It is important for educational leaders to not merely symbolically commit to ESD on paper; instead, policy should adopt a whole-institution approach in which all actions and decisions stipulated on paper are displayed through actions (of staff, students, and educational leaders) towards transformation and the implementation of ESD. A whole-institution approach is necessary to ensure that change towards sustainability is not isolated in one core activity of HEIs. A whole-university approach of ESD implementation embraces sustainability in research, curriculum, campus operations, extension activities, the mission and vision statement, policies, targets and objectives, the creation and implementation of educational strategies, and strategic planning and partnerships with stakeholders.

The fourth strategy refers to research, which receives special attention due to its potential to generate knowledge advancing society. Consequently, the availability and accessibility of scientific databases are critical to facilitate the research process, specifically areas of research under the broad umbrella of sustainability. Conducting research about ESD may be challenging, as academics and educational leaders are often overwhelmed by other duties. It is also unlikely that academics and educational leaders would adjust the scope of their research without pressure for change. For this reason, adding multi-, inter- or transdisciplinary research on ESD as a promotion criterion or as a criterion to attain research funding could serve as incentive to maximise the implementation of ESD in research.

The fifth strategy refers to interdisciplinary and transdisciplinary approaches, which also receive special attention since they have potential to reveal permanent complex relationships between economic, social and environmental realms of sustainability. HEIs should promote inter- and transdisciplinary collaboration, dialogue, thinking and action in their core activities and whole-institution approach in terms of their research, teaching and extension activities. These approaches allow academics and students to engage with multiple perspectives and solutions from a variety of fields, which are needed in order to effectively respond to the challenges imposed on HEIs by the holistic nature of sustainability. Cooperation among HEIs through international events such as conferences and workshops have been identified as conducive to sharing knowledge, learning, and establishing new research projects across diverse fields.

The last strategy is to utilise existing quality assurance processes and external benchmarking of HEIs to make sustainability a curriculum and research requirement. The effectiveness of external agencies in encouraging compliance and implementation of sustainability strategies is grounded in the reality that HEIs receive funding for their

commitment to sustainability strategies. In addition, there is a high possibility that making ESD an explicitly assessed outcome of the curriculum would increase students' engagement. If sustainability is not part of the curriculum or exams, students may choose to disregard it. In addition, ESD should also be included in the criteria for determining quality and competitiveness. In this context, a national ranking incorporating sustainability as criterion has great potential to motivate HEIs to implement ESD.

Conclusion

As evident from the findings, the main challenges with implementation of ESD include academics working in isolation, lack of support towards sustainable initiatives from senior management of HEIs as well as poor implementation of sustainability-related commitments and policies. Consequently, tertiary education experiences of graduates may give insight into sustainability but fall short of capturing a deeper, interconnected understanding of the principles of sustainability (Mula et al., 2017). Considering the critical role HEIs play in the achievement of the UN's 17 SDGs and in protection of people and the planet, it is encouraging that the majority of SA HEIs have proactively responded to the dynamic challenges associated with ESD. Educational institutions can learn from the manner in which SA HEIs under investigation have responded to economic, social and environmental changes by employing an interdisciplinary approach to research, dialogue and teaching. In addition, it is clear that SA HEIs incorporate sustainability-related content in their curriculums. It is important to note that individual HEIs and faculties display great commitment and progress towards sustainability. However, at times, there is a lack of participation on the part of some HEIs and faculties. Furthermore, it is evident that a prerequisite for an effective response to the challenges associated with ESD is to have a clear understanding of the holistic nature of sustainability. An obvious starting point towards improvement would be for HEIs to define sustainability-related terms and clearly articulate the role of staff and students in achieving SD.

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