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Problems with Sustainable Development Education

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Abstract

When it comes to making sustainability a reality, many people look to Education for Sustainable Development (ESD). Unfortunately, higher education in particular has a dismal record of incorporating ESD. Accordingly, identifying the obstacles that have been put in the way of ESD's widespread adoption is crucial. This research investigates the major obstacles that have slowed the spread of ESD. Furthermore, this article highlights how the prevalent social paradigm significantly determines and perpetuates ESD obstacles. This paper argues that eliminating some of the obstacles to ESD implementation—specifically, the current societal paradigm is crucial. Overuse of resources, water scarcity, and income disparity are all factors that make it urgent to remove obstacles to ESD.

Keywords:

Business and management studies, executive training, and classroom instruction challenges to ESD, educational disciplinarity, interdisciplinarity, and the prevailing societal paradigm.

Introduction

Many people believe that sustainable development is the only option to prevent ecological and societal collapse (Brundtland, 2019). The introduction of the Sustainable Development Goals in 2015 was crucial to the latter (United Nations, 2019). Secretary-General of the United Nations António Guterres warns that the planet and the future we want are in danger because, despite our best efforts, we will not be able to accomplish the Sustainable Development Goals (SDGs). To get anywhere near the SDGs, we need everyone to pitch in and go at top speed (Guterres, 2019). In particular, Goal 4 of the Sustainable Development Agenda emphasises the importance of education in fostering a sustainable future (Foley, 2016). As a result, the paper delves into the obstacles that have slowed the spread of ESD. In the first part of this study, we examine the prevalent social paradigm as a significant long-term impediment. Education itself, the pedagogic norms of disciplinarity, the challenge of interdisciplinarity, and resistance to change within education are all impediments impacted by the prevalent societal paradigm that limit the integration of education for sustainable development. Current Social ModelIn his book "Un-Sustainability," David Midbreath (1989) argues that the political, social, and economic structures of the current social paradigm are to blame for the phenomenon (DSP). We must first investigate the elements that determine people's

views and perceptions about how society operates since, as critical realism implies, our conceptions and beliefs are historically formed and conditioned. Thomas Kuhn, a philosopher and historian of science, elucidated the manner in which a dominant belief paradigm impacts the way scientists in a certain field approach their work (1962). (Midbreath, 1989).

between This conflict paradigms persists (Marguardt, 2017; Jakobe it et al., 2014). Marquardt (2017) sheds light on this conflict by noting that development theory is more varied than ever, with ongoing debates, reinventions, and paradigm changes. The neoliberal economic model popular in the West is central to the DSP. One definition of neoliberalism offered by Harvey (2005) describes it as "a theory of political and economic practises that suggests, human well-being can best be served by the maximisation of entrepreneurial freedoms, denoted by private property rights, free markets, free trade, and individual liberty" (Harvey, 2005). There is also debate about whether or not social and environmental problems can be solved by the neoliberal approach (Konini, 2014). According to the arguments of Konini (2012) and Crest (2012), prevailing anthropocentrism, the neoliberal ideology, has a strong impact on the field of social science. Concerningly, neoliberalism was not identified as a hegemonic factor in the UN Decade of Education for Sustainable Development (DESD) or challenged in any way (Huckle and Walls, 2015). The DSP has been perpetuated and accepted in society thanks in large part to the official education system, which has played an important role in upholding social hegemony (Apple, 2004). In a similar vein, Sterling (1996) has emphasised that further knowledge is a natural progression rather than a threat to the DSP's logic. Doers et al. (2008) write, "If universities are to be actors in the paradigm shift to sustainability, then it is necessary to reframe and analyse the function of universities in a larger socio-cultural and historical framework." Barriers to ESD, as depicted in Fig. 1, are influenced by the prevalent social paradigm.



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Figure 1. Education for sustainable development barriers

Schooling Is a Stumbling Block to Sustainable Development Education

Education is a barrier to ESD since it is influenced by the DSP. Despite the fact that HE must engage research and learning for sustainable in development (Koehn and Ditto, 2014), there is a low commitment to ESD in HE, as shown by Scott et al., (2012). (Wei Quan, 2013). Securing the backing of upper management is viewed as crucial to improving ESD implementation (Wei Quan, 2013). Much of the discussion in the literature on Higher Education for Sustainable Development (HESD) has centred on the obstacles that stand in the way of a more comprehensive adoption of sustainable practises throughout the sector (Lambrecht's et al., 2017). According to Verhulst and Lambrecht's (2015), a systematic integration of sustainability education in HE is hindered by three main factors: (1) a lack of knowledge of sustainability, (2) the structure of higher education, and (3) a lack of accessible resources.

According to Jackson (1968), the hidden curriculum may have an impact on how sustainability is taught in schools. The term "hidden curriculum" is used to describe the unspoken and frequently covert expectations for students' thought processes and conduct that are communicated by a certain educator, speaker, or educational institution (Jackson, 1968). The attitude and ideals of the school are crucial in making the concealed curriculum visible (Jackson, 1968). More recently, Winter and Cotton (2012) found that despite political support widespread for fostering sustainability graduates' literacy, widespread apathy and significant opposition prevented the incorporation of sustainability topics into the UK's higher education curriculum.

Schooling for Educators

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The United Nations' Decade of Education for Sustainable Development, which had a major emphasis on greening teacher training, ended in 2014. Pre-service teacher training programmes have not yet included sustainability education as a core component (Babyak, 2014). According to Babyak (2014), there are three obstacles that must be overcome in order to reorient teacher education towards sustainability: (1) a lack of leadership, (2) a negative perception of the role of ESD, and (3) the soloing of education faculties. Yavuz et al. (2013) used a paired pre-post design with 215 student instructors and discovered that despite the importance of environmental education, most of the students had a limited comprehension of the topic. Studying 3,299 Swedish secondary school teachers, researchers found that the majority of the educators lacked a comprehensive grasp of sustainable development and emphasised the need for more training in the field (Broga et al., 2014). Increasing the efficacy of education for sustainable development requires, as proposed by HyenaSahib and Lindemann Mathies (2015), providing instructors with ongoing opportunities to expand their expertise in the field of sustainable development.

Instruction in Business and Management

In addition to encouraging moral and social responsibility and intellectual growth, a college education is seen as one of the most effective methods of training concerned and active citizens (McAbee, 1980). (Pascarella et al., 1988). Management theorists have pointed out how business schools promote the ideals of the current societal paradigm, in contrast to the later (Alvesson and Deetz, 2000; Rosati and Clegg, 1999). According to Colin Mayer (2013), a professor of management studies at the University of Oxford, the standard position among business schools is to serve the needs of their investors. Similarly, Inlead's Professor Craig Smith thinks that before business school, students have a holistic understanding of management, but that after graduation, they see management only in terms of increasing profits for their company's shareholders (Smith, 2013). Gladwin et al. (1995) argue that management theory reflects an anthropocentric worldview and a fragmented epistemology that places humans in opposition to nature.

As a result, social and environmental accounting research is often overlooked in favour of more traditional topics like financial management and economic growth (Parker) (2011). As Sun din and Wainwright (2010) have pointed out, one of the main reasons for the delayed shift in accounting education for sustainable development is the

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absence of professional certification standards for expertise in sustainability. Multiple studies, including those by Adom Bent et al. (2014), Goleman et al. (2011), and Waldock as al. (2011), agree that sustainability should play a larger role in business and management curricula. According to the UN PRME (2019), the Principles for Responsible Management Education (PRME) should be included into business and management curricula. These principles emphasise the SDGs while encouraging business and management schools to train the next generation of leaders to strike a balance between environmental and economic concerns (UN PRME, 2019). Nelson (2014) argues that sustainability education may successfully integrate into the framework of business schools via a combination of formal instruction, active participation from industry, and cross-disciplinary partnerships. According to research by Shahadat (2010) and Greis (2010), educational leaders must be on board with a change agenda if they are to successfully implement education for sustainable development.

Guidelines for Discipline

According to Chettiparamab (2007), Selby (2006), and Arum (2004), topic disciplinarity is a significant impediment to education for sustainable development since it is influenced by the prevalent societal paradigm. According to Arum (2004), the term "discipline" has been used to describe a method of organising information for educational purposes since at least the Middle Ages. Schools and universities, as stated by Selby (2006), are organised according to different fields of study. Chettiparamab (2007) has detailed how disciplines maintain rigour and provide information useful in the workforce and in society. Institutionally, academic disciplines provide academics a structure for their professional participation, identity, and promotion, all while maintaining academic disciplines' distinctive intellectual perspectives (Kuhn, 1962). As Chettiparamab (2007) points out, too much expertise in one area might stifle critical thinking about more pressing issues in other areas, such as the real world. According to the theories advanced by Littledyke and Manolas (2011), epistemology and ideology shape educational practises because they inform the origins of subject disciplinarity. The prevailing positivist epistemology within the pedagogical norms of disciplinarity leads to a subject-based, fragmented curriculum (Eagan and Orr, 1992).

This method is grounded on a knowledge-cantered 'objectives' model of curriculum development (Leatherdyke and Manilas, 2011; Hirst, 1974), and it employs a transmission via instruction process (Lawton, 1973) in which the learner is a passive receiver of information (Leatherdyke and Manilas, 2011). Re-constructivists, on the other hand, see education as a means to an end-social transformation-and as such advocate for a learnercentric, process-oriented, rather than objectivebased, curriculum design (Leatherdyke&Manilas 2011; Blanking& Kelly 1987). In a process-based approach to curriculum development, the educator plays the role of facilitator (rather than transmitter) to the students' learning. The pedagogic norms of disciplinarity must be questioned in order for ESD's embodiment to be achieved. making reconstructivist ideology crucial (Tilbury and Wortman, 2004). This chapter discussed the significance interdisciplinarity of to the development of ESD and pointed out the dominance of subject disciplinarity when discussing epistemology, ideology, and pedagogy. This chapter discussed the role of interdisciplinarity in promoting education for sustainable development, highlighting the dominance of subject disciplinarity when addressing epistemology, ideology, and pedagogy. Integrating Knowledge from Different FieldsIn this piece, we go into the problem of interdisciplinary work. The term "interdisciplinarity" was coined by Klein and

Interdisciplinarity is "the method of approaching a subject, solving a problem, or tackling a topic that is too large or complicated to be dealt with satisfactorily by a single field or profession," as defined by the Oxford English Dictionary (Klein and Newell, 1997, p. 393).

Newell (1997), who explained it as:

Higher education (HE) in particular faces a significant issue as it attempts to shift towards a more sustainable curriculum (Katas, 2015). Aktas claims that (2015),

Increasing the importance of sustainability at universities may be accomplished via the promotion of transdisciplinary study and instruction (Aktas, 2015, p. 354).

In a similar vein, Klein (2006) has suggested that interdisciplinarity is essential to a thorough reevaluation of universities' goals and methods.

"The ultimate question that multidisciplinary research poses are the most basic. Where does schooling fit into society's grand scheme of things? Interdisciplinarity, at its best, is not a collection of discrete abilities, an extra activity, or a timetable shift. A final objective is to rethink the very nature of education itself (Klein, 2006, p. 16).

One of the most influential biologists of all time, Edward Osborne Wilson, sometimes called the "Father of Socio-biology" and "the Father of Biodiversity," argued for the need of a unified body

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The quest to bridge the scientific and humanistic disciplines has been, and always will be, the greatest enterprise. According to this theory, "the continual fragmentation of knowledge and the accompanying confusion in philosophy are not reflections of the actual world but creations of research" (Wilson, 1999, pp. 5-6).

The complex limits inherent in sustainability science methods to resolving problems in socialecological systems need specialised training, as proposed by Meyer et al. (2015). Spangenberg (2011) has made the distinction between the sustainability science of (interand transdisciplinary) and the science of sustainability (mono-disciplinary), arguing that the latter has gotten far less attention. However, as Lang et al. (2012) have pointed out, there is a growing need for transdisciplinary strategies to address critical social issues, such as sustainability. Bioeroder and Rammel, (2017) found that transdisciplinary education and research might help find practical solutions to sustainability issues.

Resistance to Change

According to Vales (2007), one of the key challenges in introducing organisational change is people's reluctance to adapt to the new ways of doing things. Similarly, Chen and Kompf (2012) found that educator pushback is a major factor in failed or superficial curricular overhauls. Failure to acknowledge the need of change is one of many hurdles to transformation on both the personal and organisational levels (Heifetz and Linksy, 2002). There will be resistance to change among educators if they are unable to see the value in it (Greenberg and Baron, 2000). Both Fullan (2001) and Greenberg and Baron (2000) provide evidence for the idea that professionals and students alike might develop a fear of the unknown when routine procedures are altered. It is simpler to keep on doing what you've always done in the classroom than than trying to learn new methods and ideas (Greenberg and Baron, 2000).

Conclusion:

Education for Sustainable Development (ESD) implementation is critical to achieving sustainability. An essential step in establishing education for sustainable development is removing the obstacles standing in its way. Recognizing the prevalent societal paradigm (which underlies other ESD challenges) and being ready to confront this paradigm are crucial to the development of ESD, particularly among educational and political leaders.

References

[1] AdomBent, M., Fischer, D., Godemann, J., Herzig, C., Otte, I., & Rieckmann, M. (2014) Emerging Areas in Research on Higher Education for Sustainable Development -Management Education, Sustainable Consumption and Perspectives from Central and Eastern Europe. Journal of Cleaner Production, 61(1), 1-7. https://doi.org/10.1016/j.jclepro.2013.09.045

[2] Agree-Europe. (2013). Position paper on Education for sustainable development. Retrieved April 12, 2014, from <u>http://www.aegee.org/about-aegee/</u>

[3] Aktas, C. B. (2015). Reflections on interdisciplinary sustainability research with undergraduate students. International Journal of Sustainability in Higher Education, 16(3), 354-366. https://doi.org/10.1108/IJSHE11-2013-0153

[4] Alcaraz, J., & Thiruvattal, E. (2010). An Interview with Manuel Escudero: The United Nations' Principles for Responsible Management Education: A Global Call for Sustainability. Academy of Management Learning and Education, 9(3), 542-550. https://doi.org/10.5465/amle.9.3.zqr542

[5] Alvesson, M., & Deetz, S. (2000). Doing Critical Management Research: a Critical Introduction. Sage: London. <u>https://doi.org/10.4135/9781849208918</u>

[6] Apple, M. (2004). Ideology and Curriculum (3rd ed.). New York and London UK: Routledge Falmer. https://doi.org/10.4324/9780203487563 Arum, J. (2004). Concepts of Interdisciplinarity: Configurations of knowledge Relations, and action. Human 57(4). 39-412 https://doi.org/10.1177/0018726704043893

[7] Babiuk, G. (2014) The status of education for sustainability in initial teacher education programmes: A Canadian case study. International Journal of Sustainability in Higher Education, 15(4), 418-430. <u>https://doi.org/10.1108/IJSHE-10-2012-0088</u>

[8] Banaji, S., Cranmer, S., & Perrotta, C. (2013). What's stopping us? Barriers to creativity and innovation in schooling across Europe.

[9] In K. Thomas, & J. Chan (Eds.), Handbook of Research on Creativity. Edward Elgar Publishing, Cheltenham, UK. https://doi.org/10.4337/9780857939814.00044

[10] Biberhofer, P., & Rammel, C. (2017). Transdisciplinary learning and teaching as answers to urban sustainability challenges. International Journal of Sustainability in Higher Education, 18(1), 63-83. <u>https://doi.org/10.1108/IJSHE-04-2015-0078</u>

[11] Blenkin, G. M., & Kelly, A. V. (1987). The Primary Curriculum: A Process Approach to Curriculum Planning (2nd ed.). PCP, London.

[12] Borga, C., Gerickea, N., Höglunda, H. O., & Bergmana, E. (2014). Subject- and experience-bound differences in teachers' conceptual understanding of sustainable development. Environmental Education Research, 20(4), 526-511. https://doi.org/10.1080/13504622.2013.833584

[13] Brundtland, G. H. (2019). The Future Is Now: The Science for Achieving Sustainable Development, Global Sustainable Development Report 2019. Department of Economic and Social Affairs, United Nations. Retrieved November 17, 2020, from https://sustainabledevelopment.un.org/content/documents/247 97GSDR_report_2019.

[14] pdf Chen, S., & Komph, M. (2012). Chinese Scholars on Western Ideas about Thinking, Leadership, Reform and Development. Sense Publishers. <u>https://doi.org/10.1007/978-</u> 94-6209-010-1