DOI: 10.2478/dcse-2022-0011

sciendo

Discourse and Communication for Sustainable Education,
vol. 13, no. 1, pp. 145–153, 2022

Education for Sustainable Development, Curriculum Reform and Implications for Teacher Education in a Small Island Developing State

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Abstract

Education for Sustainable Development (ESD) has been identified as a viable means of securing a sustainable present and future. However, the existing body of literature related to Sustainable Development (SD) and ESD varies. Additionally, there is a paucity of studies conducted within the context of the Small Island Developing States (SIDS) such as Jamaica which are unique in their biodiversity, culture, economy and society. As a member state of the United Nations, Jamaica is expected to devise and implement strategies towards SD, guided by the 17 Sustainable Development Goals (SDGs). However, there is a need for these strategies to be contextually appropriate and relevant as efforts are pursued to engage in curriculum reform seeking to improve learners' knowledge, values, competencies and dispositions towards sustainable lifestyles. Consequently, curriculum reform should be carefully aligned with teacher education and its implementers. With this in mind, this paper seeks to i) contextualise ESD, ii) review salient components of curriculum reforms in Jamaica and iii) proffer implications for teacher education in a small island developing state in light of ESD curriculum reforms.

Key words: Sustainable Development (SD), Education for Sustainable Development (ESD), curriculum reform, teacher education

Introduction

The ultimate test of an efficient and effective education system is judged on the capabilities of its beneficiaries to cope with the demands of living in their communities (Gift, 1996). In recent years, there have been major forums (e.g., The Earth Summit, the United Nations Climate Change Conferences) where issues of sustainability are raised and discussed. These issues, according to Selby (2006) come into focus given the carrying capacity of the environment and the pace, desires and aspirations of human development. One of the ways in which these issues may be addressed is through education, therefore, the concept of Education for Sustainable Development (ESD) has been proffered. In light of the aforementioned, in this paper I first contextualise ESD, followed by pertinent observations regarding curriculum reform within the context of Jamaica as a Small

Island Developing State (SIDS). In the third section of this paper, I espouse my professional experiences working with pre- and in-service teachers and the literature to examine critical implications for teacher education.

Contextualising Education for Sustainable Development

Since the adoption of the 17 Sustainable Development Goals (SDGs) by the United Nations in 2015, there have been more noticeable efforts by countries to pay keen attention to issues associated with SD. The literature pertaining to SD though, is rather varied as proponents and critics have advanced their own arguments related to how SD is conceptualised, practised and even evaluated. On the one hand, Fien and Tilbury (2002) contest that SD is culturally and socially defined and interpreted by different groups within societies. On the other hand, the term SD is inherently vague, eliciting divergent practices and thoughts by different groups of people (Robinson, 2004). In addition, according to the United Nations Educational, Scientific and Cultural Organisation (UNESCO) (2017), the term SD, since it was described in the 1987 Brundtland Commission Report, has evoked challenges in interpretation and application of principles at all levels of society in a rapidly changing world.

Notwithstanding, the genesis of SD stems from concerns regarding the pace, desires and aspirations of human development and the environment's ability and capacity to sustain these (Selby, 2006). To this end, Ferguson and Roofe (2020) reiterate that SD is a framework for social, economic and environmental development within a global community. In light of the aforementioned, education has been deemed as a critical means through which SD may be achieved. Defining education as a process, Tawil (2013) intimates that education transmits knowledge, skills and values through socialisation. Hence, educational reforms in this regard are emerging apace. But what are the implications for the ways in which teacher education curricula are able to respond in preparing pre-service teachers to deal with the attendant issues?

Of note, globally, there is a growing body of work surrounding education for ESD (UNESCO, 2012; UNESCO, 2014; UNESCO, 2017). While this is also true within the Caribbean context, much more research needs to be done to provide conceptions and practices that are contextually relevant, meeting the unique needs of SIDS. UNESCO (2012) describes ESD as a process that focuses on increasing the public's awareness and understanding of intricacies of SD, enhancing teaching and learning through reformed curricular experiences, equipping the workforce with the knowledge and skills to guarantee SD and providing access to quality basic education. Similarly, Nketsia et al. (2020), contest that ESD "is an educational approach that aims to prepare all children, youths and adults with knowledge, skills and values to create and enjoy [a] sustainable future" (p. 50). In an attempt to make ESD contextually appropriate, Down (2015) places it into four categories: *community* (the needs of a community become the focal point for sustainable development), *content* (this is selected based on the needs of the community), *context* (having a holistic and futuristic perspective) and *action* (actively engaging in addressing the needs). However, the issue is once again raised as the term SD presents ambiguity given that the needs of different communities within any one society will vary and the needs of that society will also vary from another society.

On the premise that SD is important as it seeks to protect the world from any form of development that could cause harm to the environment and humans (Balakrishnan,

Tochinai, & Kanemitsu, 2019), it is vital to ensure that all individuals and societies possess the skills, values and knowledge to create a world that is more just, peaceful and sustainable (UNESCO, 2014). ESD, according to Down (2010), encompasses philosophical underpinnings that stipulate that "education should lead to the creation of harmony and balance in our relationship with the environment as well as in our social and economic relationships" (p. 60). Similarly, Leitch et al. (2018) argue that in order to achieve SD we are compelled to modify the ways in which we think and act, with an ultimate goal of leading sustainable lifestyles through our consumption and production habits. Hence, it is imperative for ESD and its principles to go beyond formal education systems.

Hopkins and McKeown (2002) argue that ESD is a lifelong endeavour and it would be remiss of us to fathom that current formal education systems will teach people everything they need to know and be able to do to attain SD. Down (2010) argues that "education is seen as enabling us to understand ourselves and our links with the wider natural and social environment" (p. 60). Education, therefore, has to be seen and executed as a transformative process that allows us to understand our responsibility to nature for it to not only survive our actions but to thrive so future generations may benefit. Heed should also be taken from UNESCO's (2011) caution that while education is often associated with the happenings within classrooms, learning occurs in a wide variety of social contexts. Similarly, Wals and Kieft (2010) remind us that there is no global blueprint that stipulates what ESD encompasses. This strengthens the call for efforts to attain SD be contextually relevant.

Of the 17 SDGs that have been adopted by member states of the United Nations, one goal is specifically dedicated to education – SDG4. As emphasised by Ferguson and Roofe (2020), the role of SDG4 is as crucial to the attainment of SD as it is to the attainment of the other 16 SDGs. Similarly, the United Nations (n.d.) has argued that all 17 SDGs are integrated and indivisible. Notwithstanding, each goal comprises a set of targets to be attained within a fifteen-year period. With a total of seven outcome targets and three means of implementation, SDG4 aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all by 2030 (UNESCO Institute for Statistics, 2018, p. 7). While it is not my intention to diminish in any way any of the targets under SDG4, I wish to highlight target 4.7 which, according to Ferguson et al. (2019) seeks to ensure that

> *all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development* (p. 7).

In light of the aforementioned, the role of teachers is once again echoed as they play a vital part in the (re)socialisation of young people for sustainable development (Wiltshire, 2008).

Curriculum Reform and ESD Curriculum Implementation

As with the concept of SD, the conceptualisation of curriculum varies from scholar to scholar. Bobbitt (1981) advances that a curriculum is "that series of things which children and youth must do and experience by way of developing abilities to do the things well that make up the affairs of adult life" (p. 42). From a more contemporary perspective, Longhurst (2016) regards a curriculum as a

> *system framework that aligns four elements of an education system: the content to be taught and learnt in schools; the pedagogy that is employed by teachers to achieve and promote learning of the curriculum content; the assessment principles and systems employed to evaluate learning; and the certification system used to authenticate the judgements made in the assessment process* (p. 68).

To add, curriculum experts will also argue that curricula vary (the recommended curriculum, the written curriculum, the taught curriculum, the tested curriculum and the learned curriculum). However, Stabback (2016) argues that a quality curriculum enables "students to acquire and develop the knowledge, skills, and the associated capabilities and competencies to lead meaningful and productive lives" (p. 8). It is also fair, too, from my years of experience as an educator and as a curriculum specialist, to posit that irrespective of how well-crafted a curriculum is, its impact will vary depending on factors such, *inter alia*, teachers' curriculum orientation, leadership, student interest and external factors to the school community such as political agendas, especially within a context of a centralised education system.

As illuminated by Stevenson (2007), existing curricula reflect "mastery of many fragmented facts, concepts and simple generalisations organised loosely within discrete bodies" (p. 146). Resultantly, there exist some students who find themselves in a quandary as, based on their levels of cognitive development and/or exposure, they lack the skills to transfer knowledge and connect the dots among subject areas. If we were to continue to develop and implement curricula of this nature then we would not have truly understood the idea of an integrated curriculum where knowledge, skills and values are infused for students to become cognisant of sustainability issues and the roles they play individually and collectively. Down (2008) appeals for teachers, therefore, to audit their syllabuses in order to identify the missing gaps and emphases if they are to infuse ESD into teaching and learning experiences. But what good will it serve any society if only a minute number of teachers is sold on the idea and capable of infusing ESD into the curriculum? Hence, as we seek to infuse ESD into existing curricula and curriculum reforms, let us be mindful that change has to be properly managed. Fullan (2007) reminds us that while change appears as common sense, it becomes evasive on a large scale. He contends that large scale reform is about shared meaning, encompassing individual and social change.

The island of Jamaica is one of 39 countries comprising SIDS around the world. These islands have been grouped based on population, size and Gross Domestic Product (GDP) (Gift, 1996). SIDS are considered unique as they possess exclusive biodiversity and cultural heritage, an indication that challenges faced are also unique and require concrete actions to safeguard their futures (Ashe, 2014). According to Ferguson (2008), the environmental and economic context of Jamaica illuminates the need for environmental education initiatives. She also suggests that since the 1970s there have been

growing interests in environmental education in Jamaica and the Caribbean. In the Jamaican context, too, Vision 2030 Jamaica is the first long term strategic development plan that outlines strategies to attain sustainable development. The plan outlines four broad goals that seek to i) empower Jamaicans to achieve their fullest potential; ii) ensure the Jamaican society is just, secure, cohesive and safe; iii) maintain a prosperous economy; and iv) achieve environmental efficiency (Planning Institute of Jamaica, 2009).

In keeping with its trust to engage in curriculum reform, the Ministry of Education (MoE) in Jamaica commenced the implementation of the National Standards Curriculum (NSC) in 2016. Conceding that there is a paucity in research as it relates to Jamaican teachers' implementation experiences with the NSC, Roofe and Baldwin (2020) state that the NSC "helps students to search for meaning and connect content of the subjects they pursue in schools with the contents of their lives" (p. i) and that it "requires teachers to implement new subjects, methodologies, and a range of assessments in improving learning" (p. ii). Additionally, Mayne and Dixon (2020) intimate that the NSC is designed to prepare 21st century learners in dynamic, challenging, inclusive and inspiring ways. This curriculum emerged as its predecessor, the Reform for Secondary Education (ROSE) curriculum needed to be revamped. According to Jennings (2002), teachers perceived that their social status was eroded as the ROSE curriculum was now the benchmark for New Secondary, All Age and Traditional schools. She also suggested that Traditional high schools questioned the value of a common curriculum, and recalling of information prevailed instead of learning environments that needed to promote cooperative learning and problem-solving.

The shortfalls in the ROSE curriculum highlighted by Jennings (2002) point directly to the role of the teacher in the reform process. Mayne and Dixon (2020) contend that it is imperative for teachers to be equipped with the skills to facilitate project-based, problem-based and inquiry-based learning. These opportunities, according to Ferguson and Roofe (2020), allow students to evaluate complex social, economic and environmental issues to the benefit of society. Therefore, the role of the teacher is, without a doubt, a significant one that should be taken seriously and while there are implications for in-service teachers, there are ramifications for teacher education programmes. Hopkins and McKeown (2002) are of the belief that teacher education needs to be reoriented to address ESD as "the development of new professionals with ESD expertise will profoundly shorten the response time for achieving sustainability" (p. 22). Certainly, there are many implications for teacher education within the context of SIDS as we move towards ESD curriculum reform. However, based on my experiences as a teacher educator, my experiences working with pre- and in-service school leaders across Jamaica and the relevant literature, I have identified and examined three implications which I consider to be vital in our discussions and efforts as we forge ahead.

Implications for Teacher Education

As previously discussed, SIDS such as Jamaica are unique in varying ways such as our history, our biodiversity and the melange of cultural practices and experiences. Therefore, SD and ESD have to be contextually relevant and appropriate as we seek to co-exist in a global space. In this regard, the ways in which we engage teacher education must be so aligned. The implications discussed below must be examined as we seek to reorient teacher education to meet the aims of ESD.

Firstly, there is a need for greater alignment between the teacher education curriculum and that at the secondary and primary levels. Within the context of Jamaica, the NSC spans grades 1–9 and there is no direct and explicit link between how it translates into teacher education. It is imperative that the same values, knowledge and skills being desired of students be inculcated in pre-service teachers during their own training. It perhaps may be quite unreasonable for pre-service teachers to foster values and skills in their students when they themselves are found wanting in those areas. As argued by Fabionar (2020), teacher educators cannot control the practices of student teachers once they complete their programme of study. It may therefore be worthwhile to enable those who are trained to teach teachers to develop these characteristics and traits during the teacher education curriculum experiences. Similarly, respective stakeholders, including the MoE, teacher education bodies and curriculum developers must engage publicly in collaborative efforts to ensure greater alignment and dissemination of work being done. Jennings (2002) argues that "a weakness in developmental efforts in the Region is the failure to document attempts at educational reform, to evaluate them and to make the information publicly available and easily accessible" (p. 106).

Secondly, pre-service teachers must appreciate, understand and be ready to deal with the fact that schools exist within communities. The needs of these communities will differ as will the cultures of the schools. Unfortunately, some schools will be located in violence-prone areas while others will not. Some schools will be plagued by poor infrastructure while others will have manicured lawns and renovated buildings with high-tech gadgets. Some schools will suffer from low levels of parental involvement while others will bask in strong alumni bodies and Parent Teachers Associations. Some schools will have students who read one, two or three levels below their grade levels. Some schools will be supported by community members while others will be at the mercy of those who fail to see the need for their involvement. Some schools will be prone to the devastating impact of natural disasters while others will serve as safe havens. Regardless of the circumstance(s), it is incumbent on the teacher education curriculum and those who enact it to ensure that pre-service teachers are exposed to diverse issues related to sustainable development that may not have been the case based on the communities from which they hail. Therefore, the teacher education curriculum experience should allow (the pre-service teachers) to be reflexive and reflective on their practices and abilities to identify and implement sustainability solutions that are specific to the context within which they will teach.

Finally, to secure the impact that we desire in building an awareness for and skills to deal with issues of SD, there must be concerted efforts and investments into the training, development and involvement of teacher educators. Teacher educators could and should assume leadership roles in building awareness, envisaging, conceptualising, planning and implementing curricula, programmes, pedagogy and policies that support ESD (Hordatt Gentles, 2018). However, if they are found lacking in the requisite knowledge and skills then our expectations may be too great. Outside of the Caribbean context, Evans and Ferreira (2020) have found that teacher educators apply a wide range of sustainability pedagogies, however, their effectiveness is under researched and under evaluated. With this in mind, it is imperative for us to build the capacities of our teacher educators to engage with sustainability pedagogies and the resources to research and evaluate their effectiveness on student outcomes.

Conclusions

Curriculum reform is viewed as a means of improving educational outcomes and the abilities of students and youths to function within societies while making positive contributions. These contributions should be viewed within the remit of sustainable development as there are concerns regarding the carrying capacity of the environment, as well as the desires, pace and aspirations of human development and interactions with others. Education has been identified as a viable avenue through which we should pursue sustainable lifestyles and so as we endeavour to engage in curriculum reforms to infuse and integrate sustainability issues and practices we must carefully consider the capacity of the teacher education curriculum and its implementers to meet the demands of students. Similarly, SD and ESD must be contextually relevant and as we seek to be guided by practices globally, Jamaica, as a Small Island Developing State, must not neglect the uniqueness regarding its culture, environment, economy and society.

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