Teaching Education for Sustainable Development: Implications on Learning Programmes at Higher Education

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Abstract

This paper considers the basic elements associated with teaching education for sustainable development and outlines the implications on learning programmes at higher education institutions. In particular, the paper considers the extent to which the formation of educators influences this process, and defends the view that an emphasis on the long-term pre-service and in-service training of educators should be a top priority.

1 Teaching Education for Sustainable Development: More Than a Question of Definition

It is widely acknowledged that education is characterised as a future-facing activity. Learning processes start at very early childhood during which children develop basic skills and pick up basic knowledge, attitudes and values from their parents and other significant persons. These formative years have been defined as crucial in for ESD. Compulsory schooling—usually taking an average 12 years of intensive learning—is a period during which issues related to sustainable development (SD) are explored in more detail. The post-compulsory education phase is characterised by steps towards finding a job/profession. It is a phase during which

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learners have an opportunity to apply any SD knowledge they might have received to their work place or opt for further training in specialised SD contexts.

This book will focus on the aspect of further training, i.e. in preparing professionals that are committed towards SD. It aims to provide examples of good practice—a varied testimony of the different ways Higher Education institutions are responding to the emerging needs for education for sustainable development (ESD).

There are many definitions for ESD. For the purposes of this paper it is regarded as the process of equipping students with the knowledge and understanding, skills and attributes needed to work and live in a way that safeguards their environmental, social and economic wellbeing, both in the present and for future generations (Longhurst 2014). It is also considered that ESD is part of the general educational remit to enable every new generation to humanise living conditions (Rauch 2008). According to "Guidance for UK Higher Education Providers" ESD means working with students to contextualise their learning to the realities of their own specialisation, profession and personal life by encouraging them to develop: (a) the notion of global citizenship; (b) a commitment towards environmental stewardship; (c) a reflection about the interaction between issues of social justice, ethics, wellbeing and ecological and economic factors; and (d) a future-facing outlook; learning to think about the consequences of actions, and how systems and societies can be adapted to ensure sustainable futures (Longhurst 2014).

The concept of sustainability, on the other hand, largely remains abstract despite the fact that there acceptable definitions. ESD is a process of learning how to make decisions that consider the long-term futures of the economy, ecology, the equitable development of all communities as well as the promotion of their cultures (Besong and Holland 2015).

The 1992 Rio Summit's drive to *reorient education towards sustainable development* was followed by a plethora of elaborations of the process of Environmental Education: Environmental and Development Education (EDE) (UNCED 1992); Environmental Education for Sustainability (EEfS) (Tilbury 1995); Education for Sustainability (EfS) (Huckle and Sterling 1996); Education for a Sustainable Future (ESF) (UNESCO 1997); Education as Sustainability (EaS) (Foster 2001); SD Education (SDE) (Smyth 2002), to cite just a few. This can be interpreted as an attempt to adapt the basic principles of Environmental Education, as outlined in the Tbilisi Conference of 1977, to the various contexts and educational realities that have evolved since (Pace 2010). Although the international community seems to have settled (for now) with the term Education for Sustainable Development (ESD), different authors in the different chapters of this book have preferred to use other terms which accentuate that "*What you call it*" is not that important, as long as what you are doing shares the same educational principles of ESD. Moreover, the chapters also evidence a preference of Higher Education (HE) institutions to develop programmes that are culturally sensitive to the contexts in which they are operating rather than settling for the importation of 'ready-made solutions' from other countries/regions.

2 The Complexity of Teaching Education for Sustainable Development

The current global economic problems, the unfair distribution of resources and ensuing conflicts, and the impacts of climate change and other environmental hazards evidence the complex web of unsustainable practices that characterise our global reality. The current paradigm of development is simply not delivering the wellbeing it has promised and consequently there is an emerging need for a shift in human mind-sets towards more sustainable values, behaviours and lifestyles that collectively improve both the environmental and human quality of life (Besong and Holland 2015). Although the UNDESD final report (UNESCO 2014) indicated a "*stepping up*" of efforts towards ESD in HE; the complexity of educational systems, the various levels of decision-making on educational policies, and traditional curricular structures are still presenting challenges for learners to develop (and transfer) competences in SD. The experiences cited in this book evidence that fast, effective and institution-wide change towards ESD in HE was always catalysed by legislation that spurred institutions to address their inertia and disciplinary traditions. Without this 'political' motivation systemic change towards ESD is a more laborious and isolated experience that is vulnerable to changes in administration, staff mobility and available resources.

Repeated declarations have pointed out multi- and inter-disciplinarity as a major characteristic of ESD as it reflects the complex issues raised when dealing with SD themes, and which in turn mirror the interconnectivity of the various dimensions of our surroundings (Tilbury et al. 2002). In the context of HE institutions, this has habitually raised implementation barriers mainly due to monodisciplinary structures predominant in these institutions (Moore 2005a). A way in between that retains the "… *traditional focus on individual subjects and at the same time open*(s) *the door to multi- and inter-disciplinary examination of real-life situations*" is proposed by the UNECE Strategy for ESD (UNECE 2005, p. 28). This continuum of curricular solutions is also evident in the programmes described in the chapters of this publication, with a particular bias to the development of integrated themes that are cross disciplinary.

In his reflection on the lack of effective preparation of graduates to address sustainability (survival) issues, Orr (1994) implies that the solution lies in a change in the way knowledge is defined and education is perceived, i.e. a departure from courses focussed on just the transmission of knowledge to *spaces for pedagogical transformation* that support transformative and transdisciplinary learning (Moore 2005b). This current publication proposes various contexts in which course design has a marked emphasis on the development of competences and autonomous learning rather than just on the acquisition of knowledge. Implicit in this development is a redefinition (or rather an evolution) of the roles of HE institutions, educators and learners.

Although preparing students for employment is a very important aspect of HE institutions, ESD programmes should focus on a wider target: preparing students for a future that is still unknown. This means providing learning experiences that

develop *critical thinking, problem solving, creativity and innovation skills, collaboration skills, contextual learning skills, self-direction, as well as communication skills* (Iliško et al. 2014, p.100). The implication is that learners are no longer considered as passive consumers of knowledge, but active participants in their education and partners in learning. The UNECE strategy suggests the setting up of teams of educators and students that together develop learning programmes (UNECE 2005). The programmes presented in the chapters of this publication are characterised by conscious steps to increase student participation, not just during the learning sessions, but also in the design of the programme and its assessment. This increased participation did not just result in a change in students' mindsets, but also in the attitudes of their tutors and the management staff of their respective universities.

ESD also implies the widening of learners' perspectives that enable a deeper and wider analysis of life experiences. The current generation of young learners are the product of the Information Age, born to a multimedia world (Nurmilaakso 2015) where learning takes place independent of physical locations. Indeed, in today's interconnected and technology-driven world, a learning environment can be virtual, online or remote (Kay and Greenhill 2011). However, the current generation is less physically fit, less equipped to interact socially, and less able to concentrate and be effective in class than previous generations. Learners need action, challenges and opportunities based on real-life interactions to develop 21st century skills (Coyle 2010). This implies that learning is not the sole prerogative of formal education institutions and requires a widening of the base of HE and going beyond the confines of the walls of traditional lecture rooms and into the community. Besides enhancing learning, such experiences (if developed) can increase the social responsibility and commitment of HE institutions. The case studies included in this publication document efforts to adopt out-of-classroom sessions that involve moving out into nature and exploring community spaces (including the HE campuses themselves).

A common knee-jerk reaction, when confronted with the daunting issues related to SD, is to try to rely on scare tactics to mould behaviours into sustainable practices. Although this approach tends to be quite favourite with media which tend to skew information to sensationalise issues, experience and research have shown that it is ineffective. When faced with predications of impending disasters and uncertain futures, most people feel overwhelmed, powerless, frustrated and too discouraged to act. Iliško et al. (2014) have shown that providing bachelor's and master's degree students with opportunities to think about preferred futures had better results. Besides suggesting solutions, students felt personally responsible to be part of these solutions. The educational programmes described in the following chapters are characterised by a focus on positive solutions by featuring and critically reflecting on success stories and role models/examples that offer an antidote to the feelings of insecurity and despair.

Learning and teaching are intimately related. Effective educators know how to choose the most appropriate pedagogies to address different contexts and different learning needs (Nurmilaakso 2015). However, effective educators do not grow on

trees, and while reorienting teacher education towards sustainability has been readily recognised as an important approach to address the urgent need for SD (Raus and Falkenberg 2014) the preparation of university lecturers has not received the same meticulous attention that is given to teachers. In this case, it seems that the major concern is just for a rigorous formation in the content dimension. Little, if any, importance is given to a candidate's communication and pedagogical skills when lecturers are employed with he institutions. It is no wonder that HE is mostly characterised by mastery of subject matter rather than the development of students as persons that are responsible for the wellbeing of Earth and its inhabitants (Orr 1994).

3 Conclusions

SD should no longer be interpreted solely as an academic subject, but as a participatory lifelong process which would involve all areas of civil society. Furthermore, ESD leads to an informed and involved citizenry having the creative problem-solving skills, scientific and social literacy, and commitment to engage in responsible individual and co-operative actions. These actions will help ensure an environmentally sound, socially just and economically prosperous future. ESD has the potential to serve as a tool for building stronger bridges between the classroom and business, and between schools and communities (UNESCO 2010). The "school of the future"—particularly HE institutions—should be a mission-driven goal in line with the goals of ESD and sustainable societies. The formation of educators is a pre-condition to achieve this goal, and therefore an emphasis on the long-term pre-service and in-service training of educators should be a top priority.

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