

THE P-E-A-C-E MODEL OF EDUCATING FOR SUSTAINABILITY: A TRANSDISCIPLINARY APPROACH TO A COMPLEX ISSUE

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Keynote presented at the 1st Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL): 19 November 2016, Medan, Indonesia.

Abstract- In an increasingly complex, globalised world, we are faced with problems that affect the whole world, be it economic crises, environmental disasters, conflict, violent extremism, over population, pollution, global warming to name but a few of the ever growing list of problems. Some educators feel that education is at a crossroads – business as usual will not suffice any longer – new courageous and creative approaches to tackling the issues facing the future decision makers on this planet, that is, our current students are needed. Education for Sustainability promises a new - and essential - start in the direction of tackling global environmental issues such as climate change. However, having examined sustainability curricula from Australia and other so-called developed nations I noticed that despite the complexity of issues supposedly addressed by Education for Sustainability there seems to be a lack of imagination and creativity when it comes to thinking beyond strictly environmental facts, scientific knowledge, technological skills and proposed attitudinal adjustments with science and technology consistently hailed as the solution to all our problems. Whilst it is true that they play an important part, what seems to be lacking from most curriculum documents I examined is an integral, transdisciplinary approach that acknowledges the complexity of the issues involved in sustainability. Introducing my P-E-A-C-E Model for Education for Sustainability I suggest that in order to make Education for Sustainability more appropriate for the complexity of issues to be addressed, two changes need to happen: (1) personal sustainability needs to give the status it deserves and (2) the old silo mentality of keeping the different academic disciplines strictly separate especially science and the arts is unsustainable. A transdisciplinary approach to EfS aims at developing planetary stewardship, global citizenship, the building and maintenance of humane relationships need to move centre-stage.

Keywords: education for sustainability; environmental preservation, peace education, education against violent extremism, cultural heritage preservation

1. EDUCATION FOR SUSTAINABILITY

Global context

Education for Sustainability (EfS) arose from the need to develop a comprehensive response to a multitude of global environmental, social, economic and political issues. The declaration of the *United Nations Decade of Education for Sustainable Development 2005-2014* highlighted the necessity to move from what had been a dominant approach within school curricula of educating ‘about’ the environment to educating ‘for’ sustainability (United Nations Education, Scientific and Cultural Organisation, UNESCO, 2005, p. 57; Henderson & Tilbury, 2004). Sustainability education, some argue, originated from a long standing tradition of environmental education. In recent years the term sustainability has been used to describe a greater variety of complex concerns and has consequently adopted a transformative, critically reflective slant (Tilbury & Cooke, 2005). The idea of sustainability gained greater prominence through the *1987 United Nations World Commission of Environment and Development (WCED) Brundtland Report - Our Common Future*. This report helped create one of the most often cited definitions in the literature of sustainability or sustainable development: “*Humanity has the ability to make development sustainable – to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs*” (United Nations World Commission on Environment & Development, WCED, 1987, p. 8). Following *Our Common Future*, it took *Agenda 21*, a document produced at the 1992 Rio Summit to call for international support for EfS. The rationale was that if we are to effect change one of the most efficacious ways is to use the widespread reach of education drawing on the expertise of the world’s teachers.

For many countries, the UN Decade of Education for Sustainable Development (DESD) identified the need for governments to strengthen their contribution to sustainability through appropriate provisions in curriculum documents. As part of the Asia-Pacific region, Australia's response to the United Nations DESD was at the time arguably stronger than any other regions of the world (Tilbury & Janousek, 2007). Whilst EfS policies in Australia were well regarded by others (Kennelly, Taylor & Serow, 2011), we have acknowledged now that with a change to a conservative government in 2013 a deep gap between policy and practice has emerged.

EfS in the Australian Context

The first serious attempt by an Australian government titled *Environmental Education for a Sustainable Future: A National Action Plan* aimed to determine a national direction to environmental education. It recognised environmental education as critical in leading to changed behaviours towards an ecologically sustainable environment. It set out an education approach to encourage people to “think broadly and understand systems, connections, patterns and causes”, and to understand that the “challenges...have social, scientific, cultural, economic and ethical aspects, all of which must be considered...a holistic appreciation of the context of environmental problems is essential” (Government of Australia, 2000, p. 4).

Subsequent to the UN launch of the DESD, the Australian Government launched *Educating for a Sustainable Future: A National Environmental Education Statement for Australian Schools* (Commonwealth of Australia, 2005). That new document provided a set of descriptors of purpose and nature of environmental education across all school years. This report was followed by *Living Sustainably: The Australian Government's National Action Plan for Education for Sustainability* (Government of Australia, 2009) that strongly aligned with the DESD focus of changing the direction of the education system toward sustainability. Principles outlined for EfS clearly identified a need for education that was not only about providing information but (almost more) importantly about transformation, change and development of critical and systems thinking but that also acknowledged the interrelationship of environmental, political, economic and social systems (Government of Australia, 2009, p. 9). The report provided a clear government mandate for sustainability to become a formally embedded component of the new national curriculum then under development.

The Australian National Curriculum and Assessment Landscape

In 2008, when the States and Territories in Australia agreed on what was later named the *Melbourne Declaration of Educational Goals* (Ministerial Council on Education, Employment, Training and Youth Affairs, MCEETYA, 2008), the document presented a set of ideas upon which an outward looking, forward thinking, dynamic national curriculum could be based. The new Australian Curriculum was launched in 2011 ready to respond to changes and anticipate future conditions. Three cross-curricular priority areas of *Aboriginal and Torres Strait Islander Histories and Cultures*, *Asia and Australia's engagement with Asia* and *Sustainability* were woven through the curriculum as they were considered relevant to students' lives in light of complex, contemporary issues (Australian Curriculum, Assessment and Reporting Authority (ACARA), n.d.) Sustainability, according to the *Shaping Paper for the Australian Curriculum*, (ACARA, 2012), in the Australian Curriculum is constructed as an ability that should permeate all learning areas with teachers being encouraged to make links between them. The idea behind this was to ensure that sustainability was not understood as a discrete set of skills and knowledge, but rather as a way of thinking and doing that transcends subject boundaries.

EfS in Australia during the un decade of sustainable development

John Fien focused Issue 8 of the Australian Conservation Foundation publication “Education for Sustainability” on “reorientating Australian Schools for a Sustainable Future.” In it, Fien raised serious concerns about Australian students lacking in awareness of sustainability-related concepts and having difficulties explaining concepts that underpin sustainability such as the precautionary principle and sustainable development (2001). He suggested that students should be given opportunities to ask themselves the following questions: (1) Does it matter to me? (2) Should I do something about it? (3) How can I do something about it? And (4) What will I do? Fien stressed that such education for sustainability would require a holistic approach to learning that had a moral base and that should be

integrated across subjects through focusing on concepts that underlie sustainable development that would help students appreciate the complexity of life (Fien, 2001, p. 19).

Fien's suggestions referred to the 2005 announcement of the United Nations' "Decade of Education for Sustainable Development" (2005-2014) which has since inspired nations, schools and individual educators (to varying degrees) to offer students opportunities to participate in the sharing of knowledge, skills, values and perspectives. Topics such as climate change, biodiversity, poverty reduction, the interdependence of environmental sustainability, economic viability and social justice are to be presented through participatory teaching and learning methods that motivate and empower learners [...] and the document promotes competencies like critical thinking, future scenarios and making decisions in a collaborative way (UNESCO, 2005).

Sadly, when the Australian government changed in 2013 from a Labor Government to Liberal Government neoliberal focusing first and foremost on economic development and to a much lesser degree on environmental sustainability, spelt out the lack of demand for further developments in the EfS area. For a while there were even discussions of dropping sustainability altogether as a cross curricular priority – this has however not been implemented. Rather, the curriculum documents were revised to make the 'weaving' into certain curriculum disciplines easier to follow. Without going into too much detail it appears that EfS does not rank as highly on the current government's agenda as, for example, numeracy, literacy and science.

Curriculum Foci for EfS

Given the thought-provoking and innovative curriculum documents developed over the past decade, it is surprising to find that when looking at the practicalities of 'What should EfS actually look like in the classroom?' many materials still focus almost exclusively on environmental sustainability, scientific knowledge, technology skills and helping students change their attitudes, notwithstanding the visionary documents published by UNESCO. In fact several types of sustainability have been defined throughout the literature and their intricate connections with each other have been identified by many scholars (see Figure 1) yet many practice-oriented EfS documents only reflect a small and narrow interpretation of the visionary theoretical literature available.

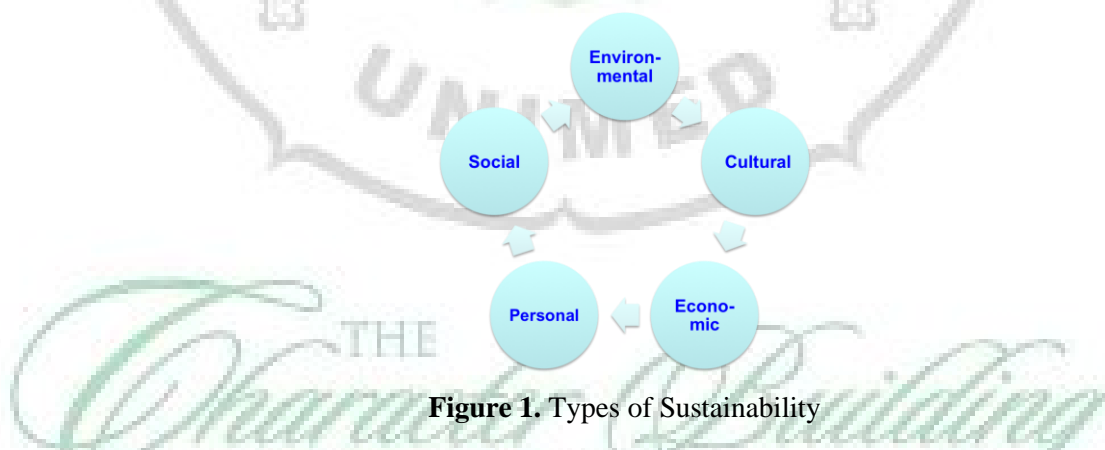


Figure 1. Types of Sustainability

Probably the best diagram I have been able to locate on this topic comes from the United Nations Information Centre Yangoon (2016) and identifies five types of sustainable development similar to the diagram in Figure 1. Figure 2 identifies the links between environmental (Planet), social (People), economic (Prosperity), cultural (Partnerships) and personal (Peace – inner and outer).

Peace education and cultural heritage preservation literature promote EfS

In the book *Educating for a culture of social and ecological peace* (2004), Anita Wenden and her co-authors identified the intricate connections between sustainable development and social and ecological peace: the authors view environmental degradation as a form of violence and environmental preservation as a pre-requisite for achieving peace. The authors speak of the need for cultural change. Authors such as Karla Nunes Penna, a UNESCO World Heritage specialist and cultural heritage preservation education scholar, have identified the juxtaposition between the wish to preserve cultural heritage in environments where abject poverty restricts people to concentrate on bare survival – a

palace is only useful as a source of housing or building material if you do not have a place to live and enough to eat (Nunes Penna & Taylor, 2014). It appears therefore that there exists a clash of values between our needs and our greed, in other words, our environmental needs versus economic wants. Yet it appears after having studied peace education and cultural heritage literature there is an equal need to include cultural, social and personal aspects if EfS is to be successful at all. The importance of peace – inner and outer – is not often mentioned in practical EfS literature – at least not often enough in practical curriculum documents that guide teachers in their efforts to make EfS work in their classroom.



Figure 2. Sustainable Development (United Nations Information Centre Yangon, n.d.)

P-E-A-C-E: An alternative model for EfS

“It is not the world that needs saving but us; we need saving from ourselves and to save ourselves we need to embrace fundamental change. This is unfortunate because, as we all know, most people are fundamentally averse to change!” (Paul Murray, 2011). A Murray outlined so eloquently, it appears that if EfS is to succeed in creating any change at all - be it at a personal or global level - it needs to start with the individual person and then move to the collective. Based on that insight I designed the P-E-A-C-E Model starting with the individual person:

- P – ower (personal)
- E – mpathy
- A – wareness
- C – are
- E - ngagement

Once personal sustainability (personal power) has been achieved, it is possible to think about others (empathy), to become aware of the bigger Figure including global environmental issues (awareness), to develop an ethic of care towards others and the environment and to be willing to actively engage in the change process. I believe that if the ‘inner work’ of personal sustainability has not yet been attempted, trying to convince adolescent students of the importance of global issues for their lives seems futile and bound for failure. Forcing students who are already reluctant to engage with the enormity of sustainability problems perhaps due to feeling overwhelmed to engage with even more challenging content without having the personal sustainability to maintain personal power seems misplaced and misguided (Taylor, Taylor & Chow, 2013). Instead of forcing more and more content onto students, it may be wiser to engage them in processes that help build a sense of personal power first. Strategies that can achieve this may include values education and clarification - both of which are vitally important to help establish the aware of personal values and an inner sense of power. They also help develop empathy for others by putting oneself into somebody else’s shoes.

Knowledge can then lead to enhanced awareness, care and action. What would a curriculum for EfS look like that takes into account all of the above?

Transdisciplinary EfS Curriculum based on P-E-A-C-E

A transdisciplinary curriculum that promotes the development of planetary stewardship, global citizenship and the building and maintenance of humane relationships (Wenden, 2004) requires P-E-A-C-E as its basis whilst acknowledging the importance of the other major types of sustainability. It cannot be restricted to science, environmental, technological or even economic contents and skills alone – this is just business as usual. Instead we need a curriculum that develops the following graduates: a well-rounded, well-versed decision-maker of the future who is knowledgeable in all of the above plus in social studies, history and geography. Somebody who has developed her/his creativity through art and design education which is enabling him/her to find unexpected solutions to complex problems. The graduate understands that sustainability relies on inner and outer peace. Showing care and empathy towards others she/he engages actively with the community and is prepared to take action for a sustainable future because he/she is well aware that without making sustainable development a reality ‘there is no Planet B’.

On reflection...

In this paper I have outlined an overview of EfS in general and in Australia in particular. I highlighted some of the shortcomings of EfS curriculum documents in terms of practical matters where most of the content still focuses (almost exclusively) on environmental, scientific, technological or economic considerations leaving out the vital contributions of history, geography, the arts and design space and of peace education. Furthermore I presented the P-E-A-C-E Model to illustrate the importance of creating personal sustainability before aiming for higher goals such as global issues including environmental, economic, social and cultural sustainability.

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