

**SUSTAINABILITY HUMANISTIC EDUCATION:
A NEW PEDAGOGY FOR A BETTER WORLD
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Abstract

Sustainability is one of the greatest challenges facing humanity, yet current educational system perpetuates rather than alleviates the threats. The history of the emerging area of sustainability education is reviewed, including brief discussion on educational discourses, namely: humane education, environmental education, ecopedagogy, education for sustainable development, education for a culture of peace and sustainability, participatory education and humanistic education. Drawing on their strengths and using examples related to climate change, sustainability humanistic education is described as an educational paradigm shift that releases individual potential to participate in a sustainability revolution. Three case studies showcase practical outcomes of this educational approach which empowers students to challenge the status quo, reject dominant practices and rather than assume existing positions in society, take the lead in creating a better world.

Keywords: sustainability, education, environment, environmental education, pedagogy, ecopedagogy, humanistic education, sustainability revolution, climate change, educational discourse, humane education, peace education, sustainable development, case studies, participatory education, individual empowerment

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Sustainability is probably one of the most complex educational areas. Firstly, there is the academic challenge to understand the interconnectedness and the compounded effects of human behaviour and actions. Secondly, there is the pressing urgency to provide answers to practical problems, such as climate change and socio-economic equity. Thirdly, the existing intertwined array of practices, policies and institutions direct human behaviour towards outcomes often detrimental to social and environmental health. Sustainability has been described as the 21st century equivalent of a new grand narrative replacing the modernist grand narrative of progress (Myerson and Rydin, 1996). Education needs to adequately reflect this at all levels. Thus this paper analyses theoretical pedagogical discourses to date and offers a new perspective employed at university level.

The first part defines the field of sustainability education outlining existing major challenges and discusses the main theoretical frameworks in this field: humane education, environmental education, ecopedagogy, education for sustainable development, education for a culture of peace and sustainability, participatory education and humanistic education. The second part puts forward a new educational approach (termed sustainability humanistic education) and the lessons learned during its application. The paper concludes that the most prominent feature of education is to empower students to challenge the current economic development narrative and create a better, more sustainable world.

1. Defining Sustainability and Sustainability Education

The concept of “sustainability” or “sustainable development” is associated with a wide range of human activities related to the use of resources, including natural, human and financial, implying long-term continuity and ability to carry on with these activities indefinitely (Marinova and McGrath, 2005). Hasna (2007) emphasizes that sustainability refers to a

development of all aspects of human life affecting sustenance. This broad spectrum of interest in development is value-laden with ethical and practical questions about justice in the distribution and use of resources, further complicated by existing policies, practices and decision-making mechanisms.

Sustainability has been characterized as a third-level discipline, with examples of the first level including Physics or Sociology and the second level including Biochemistry or Ecological Economics (Sarabhai, 2007). According to Sarabhai (2007: 1–2), “(u)nderstanding sustainable development itself is a complicated exercise that builds on the knowledge base of several disciplines including Economics, Sociology, Environmental Sciences, Development Studies, and Education and Communication to name a few” and “like all emerging bodies of knowledge, is accumulating learnings and evolving its own techniques and pedagogies”.

The challenge to the dominant model of economic progress began with Rachel Carson’s 1962 *Silent Spring* which flagged the negative effects of human activities, particularly the use of pesticides. The book, a thorough scientific account and strong statement against loss of biodiversity and the powerful influence of corporations, raised questions about species conservation and social justice. The publishing of the Club of Rome’s *Limits to Growth* (Meadows et al., 1971) clearly established the interdependence between economics and the natural environment and was immediately followed by the 1972 Stockholm United Nations’ Conference on the Human Environment. This was the first political milestone that framed the issues about human impact on the environment (including the link between haloalkanes, and specifically chlorofluorocarbons, and ozone layer depletion) to emphasize the need to solve environmental problems without ignoring social and economic development imperatives.

The first use of sustainability as an educational, social and development imperative however is linked to the work of the 1975 World Council of Churches Assembly in Nairobi

(Cobb, 1992). The publication of *Our Common Future* (the Brundtland Report) by the 1987 World Commission on Environment and Development put sustainability firmly on the agenda. It produced the most quoted definition of sustainable development: “a development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (UN, 1987: n.p.). At the 1992 United Nations’ Earth Summit in Rio de Janeiro *Agenda 21* was adopted, a defining point in human history where social, environmental and economic imperatives came together. This was followed by UNESCO’s Thessaloniki Declaration on education and public awareness for sustainability (UNESCO, 1997). In 2000, the United Nations’ General Assembly adopted the 8 Millennium Development Goals aimed at ending poverty by 2015 with Goal 7 explicitly targeting sustainability. The 2002 World Summit in Johannesburg “reaffirmed sustainable development as a central element of the international agenda and gave new impetus to global action to fight poverty and protect the environment” (UN, 2002: 1). There are high expectations for global sustainability actions in the wake of Rio+20 2012 Summit.

In parallel with the efforts of the global community to direct development onto a sustainable path, climate change (through Kyoto and consequent global meetings) became an urgent agenda but to date it has proven difficult to achieve any meaningful outcomes within the current economic development paradigm. Climate change, which may prove to be an existential threat to humankind, highlights the imperative for a radical change.

The contemporary discourse about ecology versus economy has been marked by heated political debates and global politics. Evidence originating from academic and scientific research has gradually penetrated the educational system tasked to prepare future generations to take their place within society. All political documents state the need for better education, understanding and application of the sustainability concept, and the necessity for a new education. The Brundtland Report argued that education should “provide comprehensive

knowledge, encompassing and cutting across the social and natural sciences and the humanities, thus providing insights on the interaction between natural and human resources, between development and environment” (UN, 1987: n.p.). *Agenda 21* affirmed that education is linked to all areas of human endeavor at a time when we are all “confronted with a perpetuation of disparities between and within nations, a worsening of poverty, hunger, ill health and illiteracy, and the continuing deterioration of the ecosystems” (UN, 1992: n.p.). In 2002, following the recommendation from the *Johannesburg Plan of Implementation*, the UN General Assembly declared a decade of education for sustainable development starting in 2005 (UNESCO, 2005).

We live in a disquieting time where we are witnessing an alarming and often seemingly inevitable rate of deterioration of the planet (Pearce, 2010; IPCC, 2007; CBD, 2010) and increased economic and social inequality and injustice. The educational system has been given the very challenging task of saving the world. This demands innovation, creativity and unwavering commitment to transform the basics of society.

2. The Challenge for Sustainability Education

Sustainability education, and the concepts it endorses, must facilitate the occurrence of a major transformation. According to Kahn (2003: n.p.), “education remains a primary institution towards affecting social and ecological change for the better”. Sustainability, and thus education for sustainability, differs from most other disciplines and creates a number of questions and challenges. Despite numerous achievements (largely represented through longer life expectancies around the world), the sphere of education remains a highly polemic, politicized and contested field in terms of its functions within the western capitalist system. According to Spretnak (1999: 219-221), modernity has created a rigid framework constructed from materials (refer to first column of Table 1) designed to maintain the western economic

and social status quo which perpetuates unsustainable and destructive behaviours and reasonings, including ever-increasing consumption, anthropocentrism, mechanistic and rationalist worldview. Beck et al. (2003) call for the modernity concept to be de-constructed into what they have termed “reflexive modernity” because of the “critical mass of unintended side-effects... the host of consequences resulting from the boundary-shattering force of market expansion, legal universalism and technical revolution” (Beck et al., 2003: 2). The building blocks of modernity represent progress, development and the foundations of the modern educational system, all of which are also responsible for the current ecological, social and economic crises. Sustainability and sustainability education thus clearly require a vast *paradigm shift* away from modernity.

The key to successful sustainability education is to defy these dominant paradigms, cultural norms, politics, economics, educational practices and in so doing, to equip students with new ways of doing, seeing, being and believing. Thus education should not prepare students to take their place in society; it must prepare students to create a new society!

This means that students should be able to envision a new possible world – a better place – where humanity interacts with itself and all around it in a completely different way. This is difficult, requiring a brave new worldview and charting an unproven direction. Intellectual and spiritual strength is needed to deal with all the obstacles in changing behaviours, value systems and actions, and in projecting and creating such a new and more sustainable place.

Evans (2009) describes the current educational system as a “shattered mirror” that: firstly, provides a fragmented view of the world, i.e. each broken piece of glass reflects only a particular section of the picture but the mirror itself cannot present a realistic complete view of the world; and secondly, it is always backward looking, i.e. the mirror only reflects what has already been created and cannot allow for futuristic images, forecasts or dreams. These

are exactly the practices and approaches that teaching sustainability needs to transform and replace.

Table 1. Sustainability Humanistic Education – concepts and differences with current education

| Modernity beliefs reflected in current education | | Concepts in sustainability education | | Sustainability Humanistic Education |
|--|---|--|--|--|
| Homo Economicus | The human is considered an economic being Mass production allows to achieve satisfaction through consumption | Homo Sapiens | The human is considered a being responsible for sustaining life on Earth | Constructs a critical and creative theory and practice of society aimed at a sustainable future |
| Industrialism | | Sufficiency | Understanding what really makes people happy | Educates for voluntary simplicity and quietness |
| Objectivism | Rational independent reality | Mixed reality | Objectivity and subjectivity co-exist | Provides knowledge and science filled with love, impetus and future hope |
| Progressivism | Linear progression up, constant growth | Adaptivism | Constant change and adjustment People's actions are based on knowledge but highly dependent on feelings | Filled with promise and powerful examples of obtained success Provides knowledge and educates about feelings – understanding, feeling, caring and living as part of a whole |
| Rationalism | No place for emotions and spirituality | Down-to-earth | Not only cause and effect; there are creative unfoldings | Strives to liberate potentials for the reconstruction of a better society |
| Mechanistic worldview | Understanding of matter most important | Creativity | Understanding the relationships and new emerging properties | |
| Reductionism | Understanding the whole if we understand its parts | Systems thinking | Emerging science that looks for knowledge within, between and across all disciplines | Encourages systems thinking and putting things into perspective |
| Scientism | Natural sciences dominate | Multi-, inter- and transdisciplinarity | | Always focuses on transdisciplinarity |
| Efficiency | Standardization, bureaucratization, hierarchies | Outcome-based practicalism | Questioning of what we want to achieve | Encourages practical solutions |
| Anthropocentric | Human species are most important | Responsible | Human species are guardians | Educates for understanding, empathy and compassion – solidarity as a condition of our survival |
| Instrumental reason | Modes of thinking used rather than determining of values (eg. economism) | Values dominated | Various instruments can be used but guided by values | Educates students for active and critical citizenship |
| Human opposition to nature | Development? | Unbeddedness in nature | Harmonious and integrated development | Emphasizes the relationship between people and the natural environment in terms of immediate environmental protection |
| Compartmentalization of life | Family, work, study, social life | Integration of life | Common attitudes and actions | Highlights the interconnectedness of all things and all actions |
| Hypermasculine culture | rationalism) more valued than feminine traits (eg. empathy) | Balanced culture | Male and female traits co-exist in a synergistic way | Engages in ongoing forms of permanent critique of authority |
| Shrinking of the world | The "sacred" human | Opening of the world | The "sacred" universe | The "sacred" interconnectedness Always remains positive and participatory |
| Reactive | Reacts to the needs of the market | Proactive | Creates its own opportunities | Includes a "Project of Possible Worlds" or "Another Possible World" |
| Retrospective | Trying to understand the world based on past events | Prospective | Focused on the future | Facilitates students joining with people in the community, social movements, governments and progressive groups |
| Exclusive | Designed for particular groups within society Designed for the business as usual, for the existing world, do what others have done in order to be successful | All-inclusive | Should include everybody | |
| Predictable | | Hope-based | Aims at changing the world | Aims to create a world view that is imaginative, unpredictable and full of hope |

If we are to see a sustainable future, we need a complete shift – a revolution and democratic process – underpinned by sustainability education. Its outcome will be people prepared to reject their role in maintaining the status quo and are visionary agents of change. Sustainability education requires an honest look at who we are and where we are going. It is learning about a way of being as much as it is about learning about a way of doing.

Sustainability education needs to be “essentially transformative, constructivist, and participatory. It is also integral... in that seeks to incorporate as many insights and perspectives from as many disciplines as possible to understand events, experiences, and establish contexts...” (Medrick, 2005: 1). History shows shifts in educational trajectories and discourses, none has yet delivered the crucial revolutionary change for a sustainable world.

3. Discourses in Sustainability Education

The origins of sustainability education can be traced back to over a century ago starting with calls for humane education to protect the vulnerable (e.g. children and animals) and later concentrating on the biophysical world through environmental and ecopedagogical discourses. UNESCO’s Decade for Sustainability Education brought the focus to the interconnection between people and ecology framed in parallel to the discourse about the role of peace for sustainability. Under ever-increasing pressure for urgent meaningful changes, educational discourse was further enriched with concepts of participatory education and empowering humanistic education. These discourses are briefly examined below in order to demonstrate their contribution to what we term sustainability humanistic education – a pedagogy affirming positive beliefs, morality and actions to build vision, will, capacity, skills and momentum to achieve sustainable development.

Humane education

Humane education began around 1870 when societies were mandated with both child and animal protection, and the link between animal cruelty and family violence was assumed. This link was disregarded when animal and child welfare organisations became separate entities. In the 1990s educators (e.g. Weil, 2004) returned to the roots of humane education by showing the interconnections between violence, exploitation and injustice, encompassing

both animal-related and environmental considerations. Qualities such as kindness, compassion, integrity, wisdom and honesty are among the most desired human attributes (Weil, 2004) and humane education aims to “provide students with knowledge, awareness, and information-gathering skills so that they are able to choose to live according to their list of best qualities to the greatest extent possible” (Weil, 2004: 6).

The interconnectedness between the human and the natural world “...inspires people to act with kindness and integrity and provides an antidote to the despair many feel in the face of entrenched and pervasive global problems. Humane educators cultivate an appreciation for the ways in which even the smallest decisions we make in our daily lives can have far-reaching consequences” (in Humes, 2008: 67). By focusing on values education and the interconnectedness of human rights, animal protection and environmental preservation, students are guided to examine their choices, find meaning to their life and work to improve the world around them by decreasing social and environmental suffering, oppression and destruction.

Despite its merits, this approach remains on the fringe of practice and research because of its reactive attitude. Also, it does not address the economic complexities of sustainability. Research shows humane educational graduates and educators finding themselves alienated from resource, finance and other stakeholders (Kahn and Humes, 2009). The relevance of this discourse to education for sustainability is in conceptualising virtues that guide human behaviour.

Environmental education

Environmental education, originating in the 1960s, has been widely espoused since the 1970s and is well represented in the global arena. It emphasises relationships between people and the physical environment in terms of preservation and management (Gaddotti, 2008). It

stresses the importance of a healthy ecological ambiance for human life but concentrates on how to protect the natural environment. The 1990s witnessed the efforts of environmental educators to redefine their role in relation to sustainability by adopting an issue-based approach, stressing participation, action-orientated learning and values (Tilbury, 1995). It also aligned itself with concerns about the future (Palmer, 1998). The overwhelming scientific evidence about climate change caused environmental education to start questioning people's lifestyles.

Nevertheless, it is considered by many to be an outdated approach that is too narrow in content coverage, conservationist ideas and direction to engender broad-based sustainability (Newman, 2006; Rennie, 2008). Most importantly, it separates the environment from the social, political and economic aspects of life and is contributing to barriers and conflicts between science and environmental advocacy, and industry and government endeavours for economic development. Critics say that increasing environmental knowledge needs to be supplemented by changing attitudes, emotions and beliefs (Pooley and O'Connor, 2000). Despite strong support for new environmental education paradigm, many question whether proponents fully understand the personal and societal implications of 'limits to growth' and 'living in harmony with nature' (Dunlap and van Liere, 2008).

This justified criticism does not diminish the contribution of environmental education to understanding relationships between people and nature, and it continues to inform the teaching of sustainability.

Ecopedagogy

Ecopedagogy grew from discussions at the Rio Earth Summit to formulate a mission for education that universally integrates an ecological ethic (Gutierrez and Prado, 1999 and Gadotti, 2000). Drawing from critical pedagogy (Freire, 1972), it encourages students to

question dominating beliefs and practice to achieve a critical consciousness in a continuous process of unlearning, learning and relearning, and evaluation and reflection with a future-oriented ecological political vision (Kahn, 2010). Ecopedagogy embraces environmental education but also engages students in a philosophical reflection on the ends and purposes of knowledge by challenging them to develop concrete actions. It forges an appreciation for the collective potentials of being human.

As an educational discourse, ecopedagogy critiques hegemonic education that simply reinforces the problems creating the global sustainability crisis. It moves from an anthropocentric pedagogy to new practices of ecological humility, planetary awareness, planetary citizenship and a new ethical and social reference, namely planetary civilization (Gadotti, 2008). Further, it acknowledges human beings as continually in movement, “incomplete and unfinished”, constantly shaping themselves, learning and interacting with others and the world (Freire, 2004). It is opposed to standard pedagogy that is centred in tradition, static and humiliating to the learner being evaluated. Contrastingly, it is democratic and solidary, engendering transformative energies, untapped life forces and other liberatory potentials to aid the reconstruction of society into a more peaceful, harmonious and beautiful world for all creatures.

Ecopedagogy is a critical problem-posing educational discourse that calls for “new moral sensibilities, practices and consciousness for a more harmonious planetary experience” (<http://greentheoryandpraxis.org/>). Despite broadening to include the liberation of all species and wellbeing of the Earth, its primary focus remains ecological. Social inequality, poverty, peace, economic development and quality of life are not directly tackled. Nevertheless, the ecopedagogy discourse offers a planetary reference point and emphasises human responsibilities.

Education for sustainable development

UNESCO's Decade of Education for Sustainable Development (DESD) has the goals to (Gadotti, 2008: 25):

- facilitate networks and bonds amongst sustainable development educators;
- improve the teaching and learning of sustainable development;
- help the achievement of the Millennium Development Goals by means of educating for sustainable development;
- offer countries new opportunities to adopt education for sustainability as part of educational renewal.

Essentially the discourse of the DESD aims to make people aware of sustainable development and the importance of the planet's survival as it relates to people's own quest for a sustainable livelihood. It is integrative and interactive and to a limited degree, within the realm of definitions of development, emancipatory. It calls for transformational action, planetary citizenship, multi-, inter- and transcultural and multi-, inter- and transdisciplinarity dialogue that promotes the end of poverty, illiteracy, political domination and economic exploitation (Gadotti, 2008). The Decade "is not only about the content of education but equally about the process, the methodology, and the linkages it brings between subjects" (Sarabhai, 2009: 124).

It emphasises the need for new roles for the teacher and student and the importance of partnerships and stakeholder participation, including industry (e.g. Manteaw, 2008). A strong recognition is given to the emotional and spiritual sides of our experiences (both as educators and students) along with the logical and rational thinking. Consequently the DESD calls for new methods and approaches in the process of transformation of the traditional classroom.

The educational discourse of the Decade is firmly based within the complexity of globalisation as intertwined political, social, cultural, economic and environmental processes

(e.g. Spring, 2008) and it calls for a cooperative and solidary “planetisation” as distinct from the competitive aspects of the capitalist western framework of development (Gadotti, 2008). What is essential in this initiative is the focus on changing and transforming current trends and practices: “sustainable development does not look to maintain the status quo, on the contrary, it looks to acknowledge tendencies for and the implication of change” (UNESCO, 2005: 39). The DESD discourse is yet to be seriously adopted, but it has been essential in informing sustainability education.

Education for a culture of peace and sustainability

This form of education articulated comprehensively by Gadotti (2008) is based around principles and values promoting harmony in the human and natural world. It originated from Gandhi’s philosophy “The more I have, the less I am” (Joshi, 1992: 53) which resents conflicts and material possessions but encourages peace and voluntary simplicity. Within the larger context of interconnectedness every action has a consequence and individuals are spiritually sensitised to the unifying bond of energy between all life forms (Saravanamuthu, 2006).

According to Wenden (2004), the environment is a shared territory and a common resource and conceptual themes include reflective thinking, tolerance, ethno-empathy (extended to species empathy), human rights (extended to include rights of other species) and conflict resolution (Bar-Tal and Rosen, 2009). According to Gadotti (2008), it includes educating for thinking globally, educating one’s feelings, teaching our identity to the Earth as a vital human condition, educating for planetary awareness, educating for understanding and educating for voluntary simplicity and quietness. All this is valuable for sustainability education.

Participatory education

The discourse of participatory education acknowledges the wealth of knowledge, experiences, ideas and skills that students bring with them in the classroom. It focuses on creating an environment where teachers and students are equal partners and contributors in the learning process (Francis and Carter, 2001). Characteristic for this type of education is that the participants determine the contents and time-scale of the learning process as well as its logistics (Rogers, 2005). It emphasises the development of skills, such as listening and reflection, group work, facilitation, use of body language, conflict management, asking question and challenging existing practices – skills that are required for the handling of any sustainability issue.

A relatively new direction in participatory education is its link to the concepts of participatory or deliberative democracy (Dryzek, 2000), which reflects the social disillusion with democracy and current institutions, including educational ones, that encourage the maintenance of the status quo and continuation of current processes and practices (Hartz-Karp and Carson, 2009; Yanken and Henry, 2008). It is facilitated by new communication technologies “linking human beings together, supplying media and means for participation that previously only the wealthy could experience” (Knight Abowitz and Harnish, 2006: 676).

Participatory education thus requires students to partake into real-world problem solving, come up with practical working solutions and examples of how sustainability can become a reality.

Humanistic education

This discourse brings to the fore the importance of social and inter-species justice and recreates education as a world-humanising endeavour – a global project involving students,

scholars and people everywhere, encouraging and reviving civic courage, reason, democracy and justice, so that people everywhere feel empowered and are fighting for a better and more sustainable future (Grigorov, 2009).

Humanistic education has developed in response to the recognition that many universities have become commercial enterprises viewing students as customers or consumers who will sell themselves on completion of their degree to the highest bidder (e.g. Porfilio and Yu, 2006). The corporatisation of the university world has equally infected research with private industry undermining the foundations of public trust that society traditionally has held (e.g. Washburn, 2005; Moriarty, 2008). Economic globalisation has provided “renewed focus on standards, accountability, testing, and teacher performance in a globally competitive world” (Dolby and Rahman, 2008: 697), reinforcing and spreading educational stereotypes.

Knowledge is something to be passively consumed and students are exploitable human resources, requiring top-down management. As such they are subordinated, dehumanised, and robbed of the impulse to participate in the determination of their own human situation (Grigorov, 2009). Thus education now only furthers the symptoms of the disease. Evans (2009) also stresses that it avoids the matters of the heart and spirit that make people care for the prospects of future generations.

The humanistic discourse argues for restoring the role of education as a “humanising force in society, where the value of people is always a priority” (Giroux, 2000: 47). It is inexcusable for education to follow a system in which people are just live resources. Calls have also emerged from within the teaching of economics “that our field [economics] has now to reground itself in moral philosophy amid the deeper broader questions of human existence, meaning, and happiness, while mindful that humanity is a member of a larger community of multiple species and elements, necessary for our survival and health” (Mofid

and Szeghi, 2010: 22).

The humanistic discourse argues that it is realistic and justified to ignite the revolution of education so that people can raise their voices in defence of the Earth and against the decay of humane and sustainable values (Best and Nocella, 2006; Grigorov, 2009). According to Gadotti (2008: 34): “We will only be able to revolutionize our way of existing on the planet through interference in present logics and these can only be transformed and overcome through the introduction of a new logic, one that seeks viable social, economic and political alternatives”. Hence humanistic education aims to provide students and academics with the skills and rights not to sell or surrender to the system but rather to learn to challenge and change both the status quo and those who perpetuate it (see Table 2). Sustainability education should exist for humanity and the planet, not for commercial interests!

Table 2. Goals of Humanistic Education

| |
|---|
| <ul style="list-style-type: none">• End global psychology of exploitation, acquiescence and anti-reasoning• Create and develop a new eco-psychology of resistance and non-exploitation• Empower students to govern and change their situation through collective action in the name of social justice, freedom, democracy, peace and sustainability• Inspire students and give them impetus and courage to construct vigorous practices and theories, enthuse civic participation and participatory democracy• Unify students, academics, teachers and people beyond any frontiers and any differences, and against all forms of exploitation, devaluation and the devastation of humanity and nature• Empower students to take life seriously and to understand it as something sacred and significant and thus necessarily to be able to take responsibility for what is happening in the world around them• Prevent businesses or enterprises from shaping students in order to ensure supply of employees• Oppose students as products to be traded as employees deprived of unique creative experiences |
|---|

Education and educational research has constantly been shaped by the historical context and the global political, economic, social and cultural shifts (Dolby and Rahman, 2008). It is however the first time in the history of humanity that education needs to respond to issues that challenge humanity’s very nature and its role on the planet. Humanistic education if it is to achieve its purpose aims to facilitate a renewed breed of students – revolutionaries, who are driven to create an alternative world, with new democratic institutions, appropriate

technologies and a social system predicated on a democratic economy. According to Holloway (2002), the new revolutionary way to change the world is by doing things.

Viewed in this light, humanistic education is education for sustainability and it holds great hope as a humanising cultural revolution for all. The above review of progress made in sustainability education reveals that there is an agreement on the need but not the concepts and methods of delivery. All discourses have relevance but don't ignite the changes required to address the challenges of sustainability education and provide a paradigm shift.

4. Sustainability Humanistic Education

Sustainability education, grounded in a human and interspecies morality, should provide the foundation for a non-violent and loving revolution away from current practices. As such it should encourage maximum opportunities for interaction between all people for ending the indiscriminate and accelerated destruction, exploitation and devaluation of humanity and nature. It should be based on the traditions furthering democracy (Grigorov, 2009), igniting a mass groundswell towards an all-inclusive paradigm shift that will help the Earth and its resources survive for future generations. To this end, a new discourse, which we term sustainability humanistic education (SHE), has developed through our work as educators. It builds on the strengths from its predecessors and adds four distinct features, namely: recognising, understanding and accepting the changing world; imagining and visualising better possible realities; developing purposeful creative solutions; and resolutely acting to implement these opportunities. A good illustration for the necessity of these four features in an educational approach is climate change.

- *Recognising, understanding and accepting the changing world* – despite widespread denial and scepticism, climate change is a present and future existential reality (IPCC, 2007). This

requires breaking down of previous ways of knowing and learning, including the barriers between subjects and knowledge systems. The new ways of understanding the changing world is through user-inspired science (Clark, 2007) that looks for knowledge within, between and across all disciplines and understands the relationships, interconnectedness and new emerging properties informed by systems thinking. An important aspect of it is not to block emotional responses and incorporating feelings in the teaching process is essential in dealing with the rapidly changing world.

- *Imagining and visualising better possible realities* – a central philosophy and resultant way of teaching, based on Berne’s hypothesis described in the “science of acting” (Kogan, 2010), is that “one of the most important things in life is to understand reality and to keep changing our images to correspond to it, for it is our images which determine our actions and feelings” (Berne, 1969: 53 cited in Kogan, 2010: xiv). The gravity of the problems surrounding climate change can easily leave students feeling overwhelmed and pessimistic. Knowledge has limitations, but imagination doesn’t. Imagining a better possible world that holds promise and is full of hope empowers them to confront dominant views and status quo. The more emotionally and intellectually honest they are about reality, “the easier it will be for us to attain happiness and stay happy in an ever changing world” (Berne, 1969: 53 cited in Kogan, 2010: xiv). Such truthful optimism allows students to re-envisage themselves through imagination and belief and, in so doing, to better embrace their role as sustainability agents. Aligning oneself accurately to a changing reality is crucial to envisioning and participating in creating a sustainable world.

- *Developing purposeful creative solutions* – changing the world requires learners to understand that they are not purposeless pawns in a game of destruction but rather purposeful

agents in creating a more sustainable world. They need to learn to create opportunities and remain constantly positive and proactive in their search for practical solutions as they strive to liberate potentials for the reconstruction of a better society. Such purposeful problem-solving requires acknowledging that we live in a mixed reality where subjectivity, emotion and objective responses have equal relevance in creativity.

- *Resolutely acting to implement these opportunities* – through recognition, understanding, optimism and developing creative solutions students are able to become key proponents in the movement for change. Combined with awareness that humans are guardians, responsible for sustaining life on Earth, they are also empowered to help and be examples to others through all-inclusive active citizenship in harmony with nature.

Table 1 outlines the key concepts in sustainability humanistic education which make it fundamentally different to any other modern educational trajectories since industrialisation. Rather than logical education aimed at creating learners to fill an existing vocational niche, this approach is founded on imagination and belief working hand in hand with knowledge to encourage positive activism and advocacy for a sustainability revolution. Its core principles (as outlined in Table 1) are essentially sufficiency, adaptivism, the existence of mixed realities, down-to-earth approach, creativity, systems thinking, transdisciplinarity, outcome-based practicism, responsibility, value-based actions, embeddedness in nature, and proactive, all-inclusive, hope-filled integration of life and opening of the world.

Sustainability humanistic education is learning about a way of being as much as it is about learning about a way of doing. It is education for survival and progress in a dangerous time, for saving the Earth and all who live here, for participatory democracy and ensuring universities are institutions for reason and sustainable science. Such education aims to ensure

the sustainability revolution and the new culture of human responsibility and stewardship of the planet. As educators, we work together with our students to redirect society to ecological care, to do away with the powers devastating the Earth and to transform the world so that life is preserved in all its vibrant dimensions. Grigorov describes it as a place that we can now see coming over the horizon, “the horizon-line of human self-realization through education, an education and science full of love, sanity, and future hope, attuned to our human situation and all of life” (2009: 109).

Sustainability humanistic education should enable students to participate in the revolution for survival and sanity, to participate in the world not as corporate clones, in safe jobs that continue to serve the interests of very few, but as courageous visionaries and leaders able to go forth and make the changes the world needs to survive.

5. Case Studies in Sustainability Humanistic Education

The following three real life case studies (names have been changed) illustrate outcomes resulting from our sustainability humanistic education.

Case study 1: Sustainable fast food

Sonia has been a vegetarian all her life; in fact nobody in her family knows the taste of meat. She has always thought it cruel to inflict pain on animals and that killing them is inhumane when there are other alternatives. While studying, Sonia also realised that vegetarian meals have a much lower carbon footprint, cause significantly less pollution, require less water and no grain feed. She felt shocked after learning about the inhumane methods of farming and the widespread violence against meat animals. She could not reconcile how the developed world could justify the perpetuation of devastating animal, environmental and social harm and at

the same time negotiating climate change solutions and combatting obesity and health problems related to predominantly meat-based diets.

A step towards a better world is to encourage people to eat less meat. Sonia had the vision of creating a new category of sustainable fast food restaurants offering a global menu of inexpensive, nutritious, low-carbon, zero waste, low mileage and socially responsible tasty vegetarian meals. Acting on this vision, Sonia launched her vegetarian sustainable fast food restaurant chain becoming a global advocate and leader in a transition to a compassionate, ethical and more sustainable way of eating and living.

Case study 2: Greening Western Australian realty

The real estate industry had been giving Diane reliable income in Perth, Western Australia and the satisfaction of making people happy when they sell or buy a home. Despite this, there always seemed to be something missing prompting Diane to reflect on questions such as: What makes a house a good home? How is our choice of shelter affecting the environment? What are the best technologies that save energy in the house and how can we use them? How can water be saved in the homes on the Earth's driest continent?

While studying, Diane started working in a team of like-minded people. Her vision for more sustainable housing translated into the establishment of an on-line group site where the issues that are of interest to her could be shared with a broader community. This inspired her to share her growing knowledge with other real estate agents in order to raise awareness about sustainability housing considerations and opportunities in Western Australia. Diane organises ongoing discussion forums and regular training workshops to this end and has become a leader within the real estate industry and a recognised expert in energy auditing. She has become a role model for the industry and beyond highlighting and advocating for more sustainable housing possibilities and desirable changes.

Case study 3: Sustainable homes for the needy

A retired lawyer, Fiona worked in the corporate justice system all her life. Despite long hours and considerable efforts, she felt dissatisfied and personally unrewarded. She wanted a change, a more meaningful way of using her skills and abilities that would leave a long-lasting legacy and improve people's lives. Being a corporate lawyer, she felt like a pawn serving the system and the interests of the organisation she represented which sometimes went against her personal values system. Fiona recognised she was dispensable – just another person doing a job in which she could easily be replaced by another employee whose skills and experience were similar to hers. There was nothing unique, individual or visionary in her work. She understood that the corporate memory retains the smooth transactions (or vice versa) that one provides but does not remember one as an advocate for a better world.

Fiona wanted to apply herself as a professional, competent and assertive woman who could do something for people she cared about. Who were they? Where could she leave her mark and contribute towards sustained improvement and positive change in life?

While studying, Fiona found the courage to recognise and act on the love and care she still had for her birthplace South Africa. She volunteered in Khayelitsha (a sprawling shanty town with a population of around 2 million), working with orphans, raising funds, building houses in the Indlovu eco-village and developing household agreements with their occupants. Fiona proved herself as a community leader for the new NGO (non-governmental organisation) whose main agenda was to provide a better life for the children of Indlovu.

Fiona is now back in Australia but her legacy of changing the lives of those affected by HIV/AIDS and poverty, remains with the work of the NGO.

These are only three examples. Almost all students who have experienced sustainability humanistic education tell a story of personal development, advocacy and achievement resulting in a valuable contribution to an urgent and growing sustainability revolution.

Lessons learned from the case studies

Below are some lessons learned through the application of our sustainability humanistic education:

- Flexibility, adaptability and ongoing self-reflection are required in teaching, learning and application;
- Teachers and students are both all the time and work jointly and interchangeably during the learning process;
- Sustainability “psychology” confirms and reaffirms the value of each contribution before, during and after the formal learning process;
- Acceptance of fear, passion, pessimism, optimism and other emotional responses is intrinsic to sustainability humanistic education;
- Liberation of individual critical potential through a revolutionary or activist underpinning is essential;
- Every individual contribution is paramount to achieve a collective change where *everyone* lives, thinks and is more sustainable;

Through sustainability humanistic education each student is empowered to challenge the status quo by understanding the contribution they can personally make to the global struggle for sustainability. It ultimately educates for breakthrough, non-conformity, for individual and collective striving and dreaming of a better possible world. Ultimately, the biggest lesson learned is that the urgently needed sustainability revolution is dependent on students capable

of courageously challenging and changing “the system”– how big or small each individual contribution may prove to be is not important.

6. Conclusion

According to Sarabhai (2009: 124–125), “(w)hen we need to make fundamental changes in the way we relate to our only planet, when the human race needs to come back from our all powerful and human-centric illusion the industrial age gave us... education and not just technology has to be the main driver of change”. This truth is often forgotten in the political, economic or technological races to fix the world. Through sustainability humanistic education, we see students responding to and addressing some of the greatest challenges yet faced by humanity.

According to Evans (2009: 4), “...education, if it is to play a role in developing sustainable ways of being human in the world, cannot continue its traditional functions in a society headed for global catastrophe. It cannot simply aim to help individuals achieve lucrative careers in a world where continued enslavement of nature and economic and cultural colonisation of peoples serve as the inputs for economic growth”. The change needs to be substantial and faster than anything we have witnessed in the past through historic educational discourses and trajectories. The sustainability humanistic education approach has delivered positive creative milestones on the revolutionary road of transforming homo economicus into homo sustineo. In so doing it is creating a new world of common sense, liberation and democracy in which nature is treasured and the wellbeing of present and future generations is safeguarded.

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