

## SUSTAINABILITY EDUCATION: WHAT ON EARTH ARE WE DOING?

Talia Raphaely<sup>1</sup>, Dora Marinova<sup>1</sup>, Vladislav Todorov<sup>2</sup>

<sup>1</sup>Curtin University, Perth, Australia

<sup>2</sup>University of Forestry, Sofia, Bulgaria

### Abstract

The paper's title is reflective of the pressing necessity to make a strong stance about the need to examine the challenges in teaching sustainability. As an academic subject, sustainability is unique, and very different from most other disciplines for a range of reasons. It requires transdisciplinarity, urgency and immediate response to pressing needs for practical change; the application of its concepts, such as equity, diversity, locality and bioregionalism are universal all-encompassing and broad-based. Flexibility and sophistication are equally required in teaching, learning and application; the teachers and learners are both all the time and need to work jointly during the education process. Different approaches, such as eco-pedagogy, environmental education, UNESCO's education for sustainable development, participatory education and humane education, and their value are discussed before outlining humanistic sustainability education as the approach taken in teaching a Masters course in Sustainability Studies at Curtin University. Despite being a postgraduate course, the participating students are at „entry level“ in terms sustainability, with no previous foundation in the discipline, but with their hearts in the right place. The paper presents case studies and describes the achievements of several of these students. It makes the case that even though there is a crucial need for leadership in the sustainability agenda, it is not the individual but the collective work that counts. It concludes that challenging the dominant paradigms, cultural norms and local, national and international politics required to mainstream sustainability, starts from examining „what on Earth I am doing“.

**Key words:** Australia, case study, humanistic sustainability education, practical change, sustainable development, transdisciplinarity

### Introduction

*„For the very first time the young are seeing history being made before it is censored by their elders... We are now at a point where we must educate our children in what no one knew yesterday, and prepare our schools for what no one knows yet...“.*

*Margaret Mead (1928)*

We all now know of the alarming, at times seemingly inevitable, rate of deterioration of the planet and its resources. A recent cover story published in *New Scientist* [21] outlines some shocking data. Out of nine fundamental ecological health indicators, we are currently exceeding three (i.e. rate of biodiversity loss, nitrogen fixation and climate change), very close to the limit for another three (i.e. stratospheric ozone depletion, ocean acidification and phosphorus cycle), within the acceptable limits for two (i.e. change in land use and water use) and without a proper understanding as to what are the boundaries and where we stand on the last two, namely chemical pollution and atmospheric ozone loading. The author is asking: „How much further can we push the planetary life-support systems that keep us safe?“ [21]. We all now know about the implications of this ecological deterioration, for people and places everywhere, for other plant

and animal species and for nature in all its wonder. The IPCC (Intergovernmental Panel on Climate Change) and Millennium Ecological assessments (e.g. [2, 12, 23]) have provided ample scientific evidence as to what is happening with the planet. How are we, and the education we provide, responding to this? What on Earth are we doing to allow all these trends to continue?

Together with the widespread and increasing recognition of the planet's deterioration, comes an urgency to find a way of ensuring effective education for sustainability as an immediate response to pressing needs that brings about measurable, meaningful and practical change. Traditional educational paradigms (please refer to Table 1) typically reinforce a destructive and oppressive worldview and are weary and unable to cope with having to explain the moment we are living in or in answering our future needs. The world needs a new paradigm if it is to survive, a new way of being and doing and seeing. Sustainability education and the concepts it endorses (see also Table 1), must help for such a transformation to occur or cease to exist. It is dangerous to believe we are educating for change if we are being ineffective – particularly when that change may well be a matter of life or

death. According to Kahn [14], „...our moment is new – never before have the collected mass beings of the planet Earth been so thoroughly threatened with extinction as they are now and never before have so many of us raised this problem consciously and desperately together in the hopes of transforming society towards a better... education remains a primary institution towards affecting social and ecological change for the better”.

This paper explores what it is to teach sustainability. It is based on a 20-year experience in Australia, but draws on very recent examples from Curtin University. After explaining why educating for sustainability is a challenging task, we outline some specific characteristics of this new approach and present a brief history as to what has led to its development. It covers humane education, environmental education, eco-pedagogy, UNESCO’s Decade for Education for Sustainable Development (EfSD), education for a culture of peace and sustainability, participatory education and humanistic education. The paper then examines case studies from teaching a Masters course in Sustainability Studies at Curtin University in 2008 and 2009 and the lessons drawn from this experience. It concludes that the most prominent feature of education for sustainability is to allow students to feel empowered to challenge the current system and create a world that better represents their dreams for the future.

### 1. Challenges of sustainability education

Sustainability, and thus education for sustainability, is a unique field, one that is very different from most other disciplines for a range of reasons that create a number of questions and challenges. It is a relatively new subject and much is still unknown in terms of documented or proven outcomes. Progress and new developments are constantly happening but so many basic issues remain. For example, how do you measure sustainability or teaching outcomes? What does it mean to be sustainable, or more sustainable? How soon is soon enough for any changes? What are the cumulative impacts and considerations, what are the priorities?

To make things even worse teaching sustainability also means unteaching unsustainability. Evans [4] 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. They include progressivism, objectivity, rationalism, reductionism, mechanistic view of the world, scientism, efficiency, anthropocentrism, instrumental reasoning, compartmentalisation of life, humans in opposition to nature and the shrinking of the world for the benefit of the human race. (Please refer to Table 1 for clarification of these concepts.)

Unteaching unsustainability also involves dealing with habits, attitudes, perceptions and behaviours within society that encourage reckless and irresponsible actions leading to ecological and social deterioration. More often than not, such practices are encouraged by what is perceived as economically rational decision-making. For example, increased productivity and efficient use of resources can result in encouragement to consume more and further resource depletion.

Unteaching unsustainability requires us to learn to question and challenge everything we do, the institutions and systems that reinforce life as we currently know it. This requires envisioning a new world or a possible world – a better place where life interacts with itself and all around it in a completely different way. This is difficult and contrary to much traditional education as it requires a brave new worldview and charting an unproven direction. It also requires spiritual and intellectual strength to deal with all the obstacles.

Learning sustainability is a life-long journey. It is difficult to pin-point where it starts and where it ends. It is however happening against a background of vested interests, e.g. by the fossil fuels lobby or chemical companies, and calls from skeptics who see it as a conspiracy against world capitalism, another attempt at reviving the hippy movement or green fascism.

Evans [4] also stresses that the frame of the „shattered mirror”, the system of values and beliefs embodied in traditional institutions of higher education—is wooden because it feeds the intellectual abilities but avoids matters of the heart and spirit, and these are the ones that make people care for the prospects of future generations.

**Table 1. Comparison of current education and education for sustainability**

Current Education (Spretnak, 1999)		Education for Sustainability	
Progressivism	Linear progression up, constant growth	Adaptivism	Constant change and adjustment
Objectivism	Rational independent reality	Mixed reality	Objectivity and subjectivity co-exist
Rationalism	No place for emotions and spirituality	Down-to-earth	People's actions are based on knowledge but highly dependent on feelings
Mechanistic worldview	Understanding of matter most important	Creativity	Not only cause and effect; there are creative unfoldings
Reductionism	Understanding the whole if we understand its parts	Systems thinking	Understanding the relationships and new emerging properties
Scientism	Natural sciences dominate	Practicism	User-inspired
Efficiency	Standardisation, bureaucratisation, hierarchies	Outcome-based	Questioning of what we want to achieve
Anthropocentric	Human species are most important	Responsible	Human species are guardians
Instrumental reason	Modes of thinking used rather than determining of values (eg economism)	Values dominated	Various instruments can be used but guided by values
Human opposition to nature	Development?	Embeddness in nature	Harmonious and integrated development
Compartmentalisation of life	Family, work, study, social life	Integration of life	Common attitudes and actions
Shrinking of the world	The "sacred" human	Opening of the world	The "sacred" universe

Even with the best intentions, sustainability covers a vast range of interrelated topics – where do you start? Where you finish? How to prioritise between climate change, consumption, production, energy, population, urbanisation, health, poverty, inequity, injustice, human and natural rights, politics, globalisation, ethics, waste, water, resource distribution, capitalism, suppression, world orders, domination, development and the developing?... These are all examples from a lengthy list. It is not difficult to start feeling overwhelmed and pessimistic. Too much to do with too little... Is it all too late?... What good can I do? I am just one person... And the bad news keeps coming – lost species, weather calamities, oil spills, air pollution, drugs, obesity, poverty... Has humanity transformed itself into „homo economicus“ [26]? Hope for the future is being replaced by fear from, and for the future, and sustainability students and teachers have to work continuously within this space of negativity and lack of encouraging good news stories. The loss of faith in humanity hurts, and sustainability education requires an honest look at who we are and where we are going. This is confrontational and not an easy journey.

Sustainability and sustainability education require vast personal and collective paradigm shifts – completely new individual and global ways of being and doing... Yet because there are very few examples illustrating how this new way of being and doing might look, feel or work – it can sometimes feel imaginary, illusive or impossible. Where do we find the strength and the

leadership to fight against huge vested interests and a fundamentally lack of transparency? The application of almost all sustainability concepts, such as equity, diversity, locality and bioregionalism are universal, interconnected, all-encompassing and broad-based but where do we start in the classroom and in real life? Each topic we touch is directly and indirectly linked to a wide range of other related topics, making sustainability education a web of interconnections, in fact, as far as sustainability is concerned, everything is connected!

It is not only challenging to prioritise what should be taught in any given period of time that teachers and students are able to spend together, but also where do you start and where do you finish as a teacher or as a student? Life-long learning, awareness, review and adaptation are required in order to constantly remain relevant and up-to-date.

Sustainability education is unlike any other subject, discipline or group of subjects. It challenges how we relate to ourselves, each other and nature. The key is to defy all dominant paradigms, cultural norms, politics, economics, educational practices and equip students with new ways of doing, seeing, being and believing. This education cannot prepare students to take their place in society; it must prepare students to create a new society!

Sustainability education is learning about a way of being as much as it is about learning about a way of doing. These go hand in hand in a delicate and passionate tango dance that the

student and teacher must continually be sharing even when the tunes keep changing. How do we do this? This may seem a daunting task but it is essential if we are to ultimately survive on this beautiful planet Earth.

According to Evans [4], „(h)igher 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—and where that growth leaves in its wake widespread diminishment of the very natural and human resources and systems that support it“. The change needs to be substantial and faster than what we have witnessed in the past with change of educational paradigms.

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...“ [19]. The principles that need to be at its core relate to adaptivism, the existence of mixed realities, down-to-earth approach, creativity, systems thinking, practiciness, outcome-based, responsibility, value-based, embedded in nature, and allow for integration of life and opening of the world. (Please refer to Table 1 for more explanation.)

The history of efforts along these lines dates back in time for more than a century now, with the emphasis shifting to what we now perceive as a humanistic education. This journey is briefly depicted first followed by the approach and case studies from Curtin University.

## 2. Approaches to sustainability education

The overview below follows the major historical trends informing the line of work we have adopted at Curtin University and the ideas that have been woven into our approach.

### 2.1 Humane education

Humane education emerged over a century ago when humane societies were mandated with both child and animal protection and the link between animal cruelty and family violence was assumed. However this link was disregarded when animal welfare and child welfare organisations became separate entities. In the 1990s

some educators began returning to the roots of humane education by focusing on the interconnections between violence, exploitation and injustice and encompassing not only animal-related issues, but also environmental considerations.

This interconnectedness „...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. By giving students the insight they need to make truly informed choices, humane education paves the way for them to live according to abiding values that can lend meaning to their own lives while improving the world at the same time“ (Humane Education for a Humane World, IHE publication, n.d. cited in [11]).

This approach has many merits but remains on the fringe of both practice and research. It does however have relevance to us and has thus been essential into our teaching conceptualisation.

### 2.2 Environmental education

Environmental education is an already well-established subject taught since the 1970s that emphasises the relationships between people and the physical environment in terms of how to preserve it and to appropriately manage resources [7]. It stresses the importance of a healthy ecological ambiance for human life but concentrates predominantly on how to protect the natural environment.

It is considered by many to be an outdated approach that is too narrow in terms of content coverage and direction in order to engender broad-based sustainability [20]. Such an approach however paved the way to understanding the relationships between people and nature and continues to inform the teaching of sustainability.

### 2.3 Eco-pedagogy

Eco-pedagogy began in a Latin American context growing out of discussions at the first Earth Summit held in Rio de Janeiro in 1992 that aimed to formulate a mission for education that universally integrated an ecological ethic, and resulted in the Earth Charter ratified in 2000. It is an offshoot of critical pedagogy which encourages students to question and challenge domination and 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 [16]. It has an appreciation for the collective potentials of being human.

Eco-pedagogy works at a meta-level, critiquing environmental education and education for sustainable development as hegemonic forms of educational that simply reinforce the problems creating our growing global sustainability crisis. Eco-pedagogy steadily moves from an anthropocentric pedagogy to a pedagogy based on planetary awareness, towards new practices of planetary citizenship and a new ethical and social reference, namely planetary civilisation [7]. Further, it acknowledges human beings as creatures that are always in movement, as „incomplete and unfinished“ beings constantly shaping themselves, learning and interacting with others and the world [6]. It is opposed to the traditional way of pedagogy which is centred in tradition, is static and generates humiliation for the learner when he or she is evaluated. Strongly influenced by the work of the philosopher Paulo Freire, it is a democratic and solidary pedagogy that aspires to engender transformative energies, untapped life forces and other liberatory potentials capable of aiding others in the reconstruction of society on the way to a more peaceful, harmonious and beautiful world for all creatures great and small. It is ultimately a total liberation pedagogy for sustaining life [15].

#### 2.4 UNESCO's decade of education for sustainable development

The United Nations Education, Scientific and Cultural Organisation (UNESCO) declared 2005-2014 as the Decade for Education for Sustainable Development (DESD) based on the Earth Charter's principles and values adopted at the 2002 World Summit in Johannesburg [28] and begun coordination efforts to provide a humanistic foundation for all national systems of education highlighting. In essence the DESD's goals are [7]:

- to facilitate networks and bonds amongst activists who defend ESD;
- to improve ESD teaching and learning;
- to help countries to adopt the Millennium Goals by means of ESD;

- to offer countries new opportunities to adopt ESD in their efforts towards education renewal.

Essentially DESD aims to make people aware of sustainable development and the importance of the planet's survival as related 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 [7]. The Decade „is not only about the content of education but equally about the process, the methodology, and the linkages it brings between subjects“ [25]. It emphasises the need for new roles for the teacher and student, the importance of stakeholder participation, including industry (e.g. [17]) and recognition of the emotional and spiritual sides of our experiences along with the logical and rational thinking. Consequently it calls for new methods and approaches in the process of transformation of the traditional classroom. The aim is to provide a regional as well as a global map of progress towards sustainability [27].

#### 2.5 Education for a culture of peace and sustainability

This form of education articulated well by Gadotti [7] is based around many principles and values that promote harmony in the human and natural world. It originated from Gandhi's philosophy „The more I have, the less I am“ [13] which resents conflicts and material possessions but encourages peace and voluntary simplicity. According to Wenden [29], the environment is a shared territory and a common resource for life which similar to peace education requires people to learn how to share, discuss, negotiate, live together and build together. Some of the principles are [7]:

- Educating for thinking globally and transforming both local and global levels of society;
- Educating one's feelings – to feel, to take care and to live every moment of our lives making sense of this existence. We are part of a whole that is under construction;

- Teaching our identity to the Earth as a vital human condition – we must educate to be emotionally bound to the Earth;
- Educating for planetary awareness and recognition of our interdependence – no more passports, foreigners of Third and First worlds; we, the people of the Earth, are a single nation;
- Educating for understanding – education for human ethics and not for the market's instrumental ethics, for communication and how to better understand each other not how to take advantage of each other; understand solidarity as a condition of our human survival;
- Educating for voluntary simplicity and quietness – guide our lives with new values: simplicity, quietness, serenity, listening, living together, sharing discoveries and building together.

The logic of sufficiency [22] endorsed by the education for a culture of peace and sustainability is not congruent with the concepts of efficiency and economic rationalism espoused by most educational practices. It does however fit with ecological and social rationality which needs to feature in sustainability education and we have incorporated this into our approach.

### *2.6 Participatory education*

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 [5]. 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 [24]. It emphasises the development of skills, such as listening and reflection, group work, facilitation, use of body language, conflict management, asking questions and challenging existing practices, 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 [3], 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

[10, 30]. Following the conceptual model of Habermas about the transformation of the public sphere through rational-critical debate [9], this theoretical process has been broadened to include education and the contribution students can make to hot or sensitive public debates.

Participatory education thus requires students to partake in real-world problem solving, come up with practical solutions that work and provide examples of how a transition towards sustainability can become a reality. This is another valuable approach incorporated into teaching sustainability at Curtin University.

### *2.7 Humanistic education*

This is the approach that theoretically has the biggest influence and best articulates the key considerations and intentions of our conceptualisation of teaching sustainability. It is founded on the thoughts and principles of eco-pedagogy but goes a step further to recreate education as a world-humanising project – a global project of students, scholars and people everywhere, a participatory human project encouraging civic courage, that internationally revives reason and democracy, so that people everywhere feel empowered and are fighting for a better and more sustainable future [8].

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. Knowledge is something to be passively consumed to this end and students are viewed as exploitable human resources, requiring top-down management similar to any other kind of resources. As such they are dehumanised, lacking voice and robbed of the impulse to participate in the determination of their own human situation [8]. Thus education now only furthers the symptoms of the disease.

We think that it is inexcusable for education to follow a system in which people are just live resources. A commodified human being, like a commodified cow or tree, is a dead human being. So 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 [1, 8].

Hence humanistic education aims to provide students, scholars and teachers with the skills and rights not to sell or surrender to the system

but rather to learn to challenge and change it and those who perpetuate it. After all, sustainability education (and universities!) should exist for humanity and the planet, not for commercial interests! According to the humanistic approach, education must not:

- Permit businesses or enterprises to form students in the way they want to so that they can have better employees; or
- Create students as products who will be traded later into the system and deprived of the unique experience of a creative moment in life.

Humanistic education if it is to achieve its purpose should 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. It should also:

- 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 by taking up collective action in the name of social justice, freedom, democracy, peace and sustainability;
- Inspire students and give them the impetus and courage to construct vigorous practices and theories, to inspire civic participation and to support participatory democracy;
- Unity students, scholars, 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.

Viewed in this light, humanistic education is education for sustainability and it holds great hope as it is ultimately a humanising cultural revolution students can and should engage in. The case studies described in the next section illustrate the outcomes of this approach through four of our students.

### 3. Our approach to sustainability education: Humanistic sustainability education

The above review of progress made in sustainability education reveals that there is a clear agreement on the need but not the methods of delivery. All approaches have something valuable and relevant to contribute but none felt comprehensive enough for us. We believe sustainability education is a call to revolution, passive and loving but a cultural revolution non the less. As such it should ensure maximum opportunities for interaction between all people for ending the indiscriminate and accelerated destruction, exploitation and devaluation of humanity and nature. Like Grigorov [8], we believe that the traditions furthering democracy are an essential consideration that must underpin all education for sustainability. This is important for a number of reasons, not least that there needs to be a mass groundswell towards bringing about an all-inclusive paradigm shift if the Earth and its resources are to survive for future generations.

We have taken the key elements of humanistic education and combined them with others from the approaches described above and coined this Humanistic Sustainability Education. It is the way we work with our students and we focus on making sure we include the key factors described in Table 2.

Humanistic Sustainability 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. 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-realisation through education, an education and science full of love, sanity, and future hope, attuned to our human situation and all of life“ [8]. We tend to agree. The passionate tango dance between the teacher and the student leads to a dance which includes the planet that both student and teacher need to embrace as it embraces us.

**Table 2. Humanistic sustainability education**

1	Constructs a critical and creative theory and practice of society aimed at a sustainable future
2	Is filled with promise and powerful examples of obtained success
3	Provides knowledge and science filled with love, impetus and future hope
4	Always remains positive and participatory
5	Engages in ongoing forms of permanent critique of authority
6	Includes a "Project of Possible Worlds" or "Another Possible World"
7	Facilitates students joining with people in the community, social movements, governments and progressive groups
8	Educates students for active and critical citizenship
9	Always focusses on transdisciplinarity
10	Strives to liberate potentials for the reconstruction of a better society
11	Highlights the interconnectedness of all things and all actions
12	Facilitates networking and bonds amongst students
13	Emphasises the relationship between people and the natural environment in terms of immediate environmental protection
14	Educates about feelings – feeling and caring and living as part of a whole
15	Educates for understanding, empathy and compassion – solidarity as a condition of our survival
16	Educates for voluntary simplicity and quietness

Humanistic Sustainability 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.

And it's working! In the midst of so many doom and gloom stories, our students are leaving us and putting into practice true sustainability initiatives that are genuinely starting to change the world – and thus are shifting us all towards an alternative future, a future of hope and possibility where the world is safe, society is just, and in which nature and future generations and their wellbeing will be safeguarded.

Students from our Master in Sustainability Studies course in 2008 and 2009 have taken what we learnt together and have used this to start working toward changing the world. Our course participants, although Master's students, are at „entry level" in terms of sustainability, usually with no previous foundation in the field, but with their hearts in the right place. They come from all walks of life and with a wide range of life-experiences. They are taking their visions and courage and combining it with the knowledge we share with them are using this to build a better world, some on a more macro or global level and others on a more micro or local level.

*Case study 1: A global leader*

Sonia (not her real name) has been vegetarian all her life; in fact nobody in her family knows the taste of meat. She always thought that it is cruel to inflict pain in animals and that killing them is inhumane when there are other alternatives. While doing her Master in Sustainability Studies, she also realised that vegetarian

meals have a much lower carbon footprint, cause significantly less pollution, require less water, no grain feed. Sonia also felt appalled while familiarising herself with the inhumane methods of farming and the widely spread violence against farm animals. She could not reconcile how the developed world could inflict such humongous problems and at the same time fight obesity and health problems directly related to overconsumption of a predominantly meat-based diet.

A step in the right sustainability direction was to encourage people to eat less meat. Sonia had the vision of creating a new type of restaurants where people can have inexpensive nutritious and most importantly tasty vegetarian meals. This became her Sustainability Studies Project which she completed brilliantly.

Sonia's global chain of vegetarian restaurants is about to be launched making her a global leader in a transition to a healthier and more sustainable way of living.

*Case study 2: A local leader*

A charismatic young environmental engineer, Stephan (not his real name) knew a lot about the ecological health of the physical environment. He was often invited to share his passion for nature with school children and other young people which he truly enjoyed. It was however difficult for him to understand why people were not doing the right thing. Was it because of the lack of regulations, was it because of the economic burden or was it because they did not care?

Stephan started working with a local authorities organisation and realised that he was now in a position to contribute towards a change. This is also when he started his Master in Sustainability Studies. While working with us, he was able to convince his organisation that they not only needed a sustainability officer but



there was also a necessity for constant communication between like-minded people within the organisation. He established a range of strategies to facilitate training and decision-making with respect to sustainability, including a regular newsletter. Establishing himself as a local leader was a slow but a very rewarding process that he could go through encouraged and supported by his teachers.

#### *Case study 3: An industry leader*

The real estate industry has been giving Diane (not her real name) not just reliable income but also the satisfaction of making people happy when they sell or buy a home. Despite this, there has always been something missing. 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?

Despite the fact that Diane did not have any previous undergraduate degree, she had enough work-based knowledge and experience to be admitted into the graduate certificate and later continue at Master level. She was now working in a team of like-minded people who were trying to find answers to similar questions. Her passion for a more sustainable housing translated into the establishment of an on-line group site where the issues that were of interest to her could be aired out to the broader community and often find answers.

Diane became a leader within the real estate industry and an expert in energy auditing. Soon she was also a role model and started to signify the desired changes that prospective buyers would want in a new house. She was no longer just selling houses, she was educating the sellers and the buyers as to what type of living was best for them as well as for the planet.

#### *Case study 4: A community leader*

A retired lawyer who has been working with the corporate justice system all her life, felt dissatisfied and personally unrewarded for the long hours of service and considerable efforts that she has put into her job throughout the years. She wanted a change towards a more meaningful way of using her skills and abilities, something that will leave a long-lasting legacy and will improve the people's lives. Being a corporate lawyer wasn't anything special as you serve the

system and the particular interests of the organisation you represent which sometimes even go against your personal values system. You are just the person doing the job while you are there but as soon as you leave, you get easily replaced by another employee whose skills and experience are in many ways similar to yours. What the corporate memory retains are the smooth transactions or vice versa that you have been able to provide. It does not remember you as a person with a vision, as a fighter for a better world or as an empathic and sincere woman who can make you laugh as well as give you hope and encouragement.

Fiona (not her real name) wanted a better way to apply herself as a professional, competent and assertive woman. She also wanted to do something for the people she cared about. Who were they? Where the bloody hell could she leave her mark and contribute towards sustained improvement and positive change in life?

Working with us, Fiona was able to look deep into her heart and find the love and care she still had for South Africa where she was originally from. She decided to become a volunteer in Khayelitsha (a sprawling shanty town with a population of around 2 million), working with orphans, building houses in the Indlovu eco-village, raising funds and developing household agreements for 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.

After spending half a year in South Africa, Fiona is now back in Australia but her legacy remains with the work of the NGO. The Indlovu time was the basis for her Master's in Sustainability Studies project and not only did it receive the highest grade, it also changed the lives of those affected by HIV/AIDS and poverty.

These are only four examples from a long list. In fact, every student of ours has a story of personal growth and achievements to tell. We as teachers are constantly learning and improving with the work our students are doing, but most importantly we are proud to be part of a positive change.

#### 4. Lessons learned from humanistic sustainability education

Some of our thoughts on the application of our Humanistic Sustainability Education are presented in Table 3. They are summarised as the lessons we have learned. The biggest lesson

however is that of a constant hope and that to „Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it's the only thing that ever has” [18].

**Table 3. Lessons learned from humanistic sustainability education**

1	Flexibility and sophistication are equally required in teaching, learning and application
2	The teachers and learners are both all the time and need to work jointly during the education process
3	There is need for sustainability “psychology” or the ability to confirm and reaffirm the value of each and every contribution
4	Acknowledgement and recognition of the fear factor are important
5	The envisaging of future possible worlds is crucial
6	Whilst understanding of the problem is important, a solution orientation is required
7	A revolutionary or activist underpinning is essential – students are not being groomed to take their part in society but rather to find their own way and creativity to change society and the current dominant paradigms
8	The heart and the soul – feelings – must be taught and intimately considered throughout the learning and teaching process
9	The individual contribution is crucial but each individual must understand that it is the collective that counts because EVERYONE needs to live and think and be more sustainable
10	We must educate for breakthrough, for non-conformity, for yelling and for dreaming of other possible worlds
11	To make students feel empowered to challenge the system. It is important to know what each of us can do to save the planet and to understand how the responsibility and efforts of each person much be attached to the global struggle for sustainability. Changing “the system” is what matters and for this reason we must continue to make our small changes, which, if followed by millions of people, may promote the necessary big changes.

#### Conclusion

According to Sarabhai [25], „(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, and when we need to reconnect with nature and in humility learn how perfectly balanced and dynamically sustainable the natural world is, education and not just technology has to be the main driver of change”. This truth is often forgotten in the political and technological races for fixing the world. However, the education we need is the one that allows both students and teachers to ask themselves: „What the bloody hell am I doing?!” and be able to not only reflect on their actions but also come with examples of the change for this new world.

The case studies described in this article are these positive signs of change. They are the examples as to how one little person can follow their dream and create a better world in an exquisite fervent and fiery dance with the teacher. It is time for a new sustainable world of common sense, liberation and democracy in which everyone, in one form or another can partake and benefit, in which nature is treasured and the

wellbeing of future generations is safeguarded. Sustainability education we believe, must be directed to this end. In order to achieve this, whether one is a teacher or a learner – or a practitioner in any other field in the world, sustainability and any related sustainability education must inevitably start with the question: What on Earth are we doing?

#### Acknowledgments

*The authors wish to acknowledge the financial support of the Australian Research Council. They are also grateful for the feedback received from friends, the participants and referees of the International Scientific Conferences on Management and Sustainable Development, Yundola, Bulgaria as well as to the journal's referees for their helpful comments.*

#### References

1. Best, S., Nocella *Igniting a Revolution: Voices in Defense of the Earth*, AK Press, Oakland, CA, 2006
2. Corvalan, C., Hales, S., McMihael, A. J. et al. *Ecosystems and Human Well-Being: Health Synthesis*, Millennium Ecosystem Report, World Health Organisation, 2005, [www.millenniumassessment.org/documents/document.357.aspx.pdf](http://www.millenniumassessment.org/documents/document.357.aspx.pdf)

3. Dryzek, J. *Deliberative Democracy and Beyond*, Oxford University Press, Oxford, 2000
4. Evans, T.L. *Reflections in a broken mirror: Higher education and the challenges of sustainability*, Green Theory & Praxis, The Journal of Ecopedagogy, Vol. 5, No. 1, 2009, pp. 1–13, doi: 10.3903/gtp.2009.1.2
5. Francis, C.A., Carter, H.C. *Participatory education for sustainable agriculture: Everyone a teacher, everyone a learner*, Journal of Sustainable Agriculture, Vol. 18, No. 1 2001, pp. 71–83
6. Freire, P. *Pedagogy of Indignation*, Paradigm Publishers, Boulder, CO, 2004
7. Gadotti, M. *Education for sustainability: A critical contribution to the Decade of Education for Sustainable Development*, Green Theory & Praxis: The Journal of Ecopedagogy, Vol 4, No. 1, 2008, pp. 15–64
8. Grigorov, S. *Let education save the Earth! Towards the realisation of new sustainable forms of humanistic education*, Green Theory & Praxis: The Journal of Ecopedagogy, Vol. 5, No. 1, 2009, pp. 93–110
9. Habermas, J. *The Structural Transformation of the Public Sphere: Reason and the Rationalization of Society*, Polity Press, Cambridge, UK, 1989
10. Hartz-Karp, J., Carson, L. *Putting the people into politics: The Australian Citizens' Parliament*, International Journal of Public Participation, Vol. 3, No. 1, 2009, pp. 9-31
11. Humes, B. *Moving towards a liberatory pedagogy for all species: Mapping the need for dialogue between humane and anti-oppressive education*, Green Theory & Praxis: The Journal of Ecopedagogy, Vol 4, No 1, 2008, pp. 65–85
12. Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: The Physical Science Basis*, Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge, 2007
13. Joshi, N. *Economics of the Spinning Wheel*, Navajiban Mudranalaya, Ahmedabad, India, 1992.
14. Kahn, R. *Towards ecopedagogy: Weaving a broad-based pedagogy of liberation for animals, nature and the oppressed people of the Earth*, Journal for Critical Animal Studies, Vol. 1, No. 1, 2003, n.p., [http://www.criticalanimalstudies.org/JCAS/Journal\\_Articles\\_download/Issue\\_1/kahn.pdf](http://www.criticalanimalstudies.org/JCAS/Journal_Articles_download/Issue_1/kahn.pdf) [19.04.2010]
15. Kahn, R., *From education for sustainable development to ecopedagogy: Sustaining capitalism or sustaining life?*, Green Theory and Praxis: The Journal of Ecopedagogy, Vol. 4, No. 1, 2008, pp. 1–14
16. Kahn, R. *Critical Pedagogy, Ecoliteracy, and Planetary Crisis: The Ecopedagogy Movement*, Peter Lang, New York, 2010
17. Manteaw, B.O. *When businesses go to school: Neoliberalism and education for sustainable development*, Journal of Education for Sustainable Development, Vol. 2, No. 2, 2008, pp. 119–126
18. Mead, M. *Coming of Age in Samoa*, Morrow, New York, 1928
19. Medrick, R. *Education as Sustainability*, Ph.D. Program in Sustainability Education, Prescott College, 2005
20. Newman, P. *The sustainability journey at Murdoch University*, in Leal Filho, W., Carpenter, D. (eds) Sustainability in the Australasian University Context, Peter Lang, Bern, 2006, pp. 163–170
21. Pearce, G. *Earth's nine lives: How much further can we push the planetary life-support systems that keep us safe?*, New Scientist, 27 February 2010, 31–35
22. Princen, T. *The Logic of Sufficiency*, MIT Press, Cambridge, MS, 2005
23. Read, M., Ash, N., Bennett, E., Kumar, P. et al. *Millennium Ecosystem Assessment Methods*, Millennium Assessment Secretariat, Penang, 2002
24. Rogers, A. *Non-formal Education: Flexible Learning or Participatory Education?*, Kluwer Academic Publishers, New York, 2005.
25. Sarabhai, K.V. *Half the decade over or half to go?*, Journal of Education for Sustainable Development, Vol.3, No. 2, 2009, pp. 123–125.
26. Spretnak, C. *The Resurgence of the Real: Body, Nature and Place in a Hypermodern World*, Routledge, New York, 1999
27. Tilbury, D. *Tracking our progress: A global monitoring and evaluation framework for the UN DESD*, Journal of Education for Sustainable Development, Vol. 3, No. 2, 2009, pp. 189–193
28. United Nations Educational, Scientific and Cultural Organisation (UNESCO), *United Nations Decade of Education for Sustainable Development (2005–2014): International Implementation Scheme*, UNESCO, Paris, 2005
29. Wenden, A. (Ed.) *Educating for a Culture of Social and Ecological Peace*, State University of New York, Albany, 2004
30. Yencken, D., Henry, N. *Democracy under Siege*, The Australian Collaboration, Albert Park, Australia, 2008