The Earth Charter's Integrated Ethical Approach to Learning to Live Together Sustainably: An Example of an International Master Course

Nelly Kostoulas-Makrakis
University of Crete, Greece

Abstract

The Earth Charter, the product of a worldwide, decade long, cross-cultural dialogue on common goals and shared values, is a vision and declaration of fundamental ethical principles for building a just, sustainable and peaceful global society in the 21st century. This paper presents the instructional/learning design of a course entitled "Teaching to Live Together Sustainably through the Earth Charter". This course is part of a curriculum of an international joint Master degree programme that aims to promote the transition to sustainable ways of living. The whole programme aims to a global society founded on a shared ethical framework that includes respect and care for the community of life, ecological integrity, universal human rights, respect for diversity, economic justice, democracy and a culture of peace. The course design on "Learning to Live Together Sustainably" has been developed for use on a global level and yet flexible enough to be interpreted within different cultural and social contexts. It looks at underlying values of education for sustainable development and need to reorient education systems, policies and practices in order to empower people in learning to live together sustainably.

Keywords: Earth Charter, learning to live together sustainably, Masters course, ethics, values

Introduction: The challenge of learning to live together sustainably

Currently, humanity is facing a number of shared crises and challenges, where the global becomes local and the local becomes global. Among them, the most notable ones are those of widespread poverty, violation of human rights, the climate change caused by unsustainable practices, the threat posed by economic globalisation, social injustice. The consequences of these crises include the increasing degradation of environment; the exacerbation of social and economic inequality; the undermining of national sovereignty and peoples' decision-making power. Education as it has been practiced so far functions as a driver for replicating an unsustainable world, rather than functioning as a driver for change. Given this, there is an urgent need to address these crises and challenges and facilitate a transition to a more sustainable world.

Education for Sustainable Development (ESD) has emerged as a new paradigm for revising and reorienting today's education. ESD generates new forms of knowing, learning and being that can lead people to transform themselves and society (cf. Wals, 2010). This new paradigm of education driven by transformative approaches to teaching and learning aims to deconstruct the perception of education for productivity to education for creativity and change (Makrakis, 2012). This transformation necessitates what Sterling (2001) stated: the integrity of the spirit, heart, head and hands. The challenge for the incorporation of sustainability in the higher educational system largely emphasised by UNESCO's Decade of Education for Sustainable Development is being implemented by various global initiatives such as the Tempus

RUCAS (Reorient University Curricula to Address Sustainability) project that is carried out in 12 European and MENA/Middle East Universities (Makrakis et al. 2012). An education for sustainability increases peoples' awareness of the complexity and interrelationships of environmental, economic, social and cultural systems. It also increases respect for the diversity of voice that exists amongst cultures, race, religion, ethnic groups, geographic and intergenerational populations (Wheeler & Byrne, 2003). "Complex realities, conflicting values, opposing claims to truth and confusing alternatives compete for their loyalty. Within such a reality, there is an intense need for ways to nurture and empower children with values that will help them make the right choices" (Arigatou Foundation, 2008:5) and learn to live together in a world of complexity and diversity.

This complexity and diversity in the world requires a change of the unsustainable education paradigm that dominated 20th century education and cross-fertilise the boundaries of vertically-oriented disciplines and other institutional, social and cultural structures (Makrakis, 2012). An oriented shift to sustainability focuses on an enhanced understanding of the principles, values and ethics necessary to change unsustainable values and practices. In this context, "Learning to Live Together" implies nurturing four ethical values that form part of ethics education in a global and culturally plural society (Arigatou Foundation, 2008). The four values, respect, empathy, reconciliation and responsibility, do not make up an exhaustive list, and they are not exclusive of other values. Ethics education is not an attempt to implant a list of values, but to nurture the spirituality needed for life in a plural world. We must also recognize that ethical values and spirituality are not two separate guides to behaviour, but are related, each enriching the other (ibid.). 'Learning to live together' is the pillar that UNESCO (1996), emphasizes more than any other. It refers first of all to developing an understanding of others through dialogue leading to empathy, respect, and appreciation. Learning to understand others implies first, learning to know ourselves and our interconnectedness with the natural world. Learning to live together sustainably is recognizing our growing interdependence with the natural and social world. This is one of the most important and critical educational challenges of our time.

Learning to clarify one's own values is a critical process for learning to live together sustainably. This necessitates the process of introspection that is learning to critically reflect upon one's inner values and knowledge constructions, which in turn are reflected to one's outer practices and behaviours. Through this process it is possible to deconstruct unsustainable constructions and their underpinning values that lead to unsustainable practices and create new constructions that are more appropriate to sustainability. Introspection gives people the chance to identify and evaluate their inner thoughts, feelings and desires through critical self-reflection. Ultimately, the transformation required to shift towards a sustainable world will entail the following ESD-related learning processes and skills stated by Tilbury (2011):

to ask critical questions;
to clarify one's own values;
to envision more positive and sustainable futures;
to think systemically;
to respond through applied learning; and,
to explore the dialectic between tradition and innovation.

A response to the challenge: The ICT-enabled ESD Programme

While many nations around the world have embraced the need for education to achieve sustainability, only limited progress has been made so far. Some of the more prevalent challenges are: a lack of or inadequately trained professionals to provide inspired ESD; disciplinary boundaries between subject areas as well as lack of educational leadership to support transformative pedagogies to address sustainability. Our state-of-the-art reviews on Master degree programmes in the field of ESD show that the great majority (Makrakis & Kostoulas-Makrakis, 2012):

1. focus on the environmental pillar of sustainable development, neglecting the other three pillars (social, cultural and economic);
2. do not exploit the potential of ICTs in addressing sustainability issues, especially Web 2 technologies and use of open education resources (learning objects) available in the Web; and;
3. employ techno-centric approaches, meaning that curriculum is developed by experts without the end-users' inputs.

There is, thus, a need of Master Degree programmes that are participatory, holistic, interdisciplinary and contextual, making use of ICTs both as learning pedagogies and means of delivering at a distance or through a blended mode. The UNESCO Chair ICT in ESD, at the University of Crete, has taken the initiative to develop a project proposal with the participation of six other European Universities entitled "ICT-enabled Education for Sustainable Development." This project, which has been funded by the European Commission, aimed to develop a joint Master degree (deployed on an advanced virtual platform) in ICT in ESD offered in English. The course mainly targets experienced practitioners in schools, NGOs, government bodies and development agencies, who want to play a key role in moving forward the issue of ESD in their working environments and the society. The specific objectives were to:

1. Develop a joint Master on ESD supported by ICTs consisting of interdisciplinary modules amounting to 120 ECTS. A Diploma Supplement will also be issued with the joint degree.
2. Develop course modules addressing the environmental, social, cultural and economic pillars of sustainable development supported by social software tools and infused by open source learning objects.
3. Develop a virtual learning platform for uploading course content, enrolment and maintenance of student records, academic profiles, scheduling of units, course monitoring, liaison, etc. combining two open source platforms (Moodle & Mahara).
4. Develop an online training toolkit addressed to university staff who, want to infuse ESD into their teaching and courses and/or apply virtual tutoring modalities.
5. Implement the training toolkit with 25 university staff from partner institutions to support the running of the joint Master.

In this joint M.Sc programme focusing on ICT in Education for Sustainable Development, the concept of learning to live together sustainably is integrated across all its content and teaching/learning methodologies. In this context, learning to live

together sustainably has been seen as the focus of four other critical pillars for 21st Century education; three of which (learning to know, leaning to do and learning to be) as well as 'learning to live together' proposed in the Delors' report to UNESCO (1996). The other one 'learning to transform oneself and society' was suggested by a number of Latin American educators, as well as UNICEF, which was adopted by UNESCO as a 5th pillar (Black, 1999).

In general, learning to live together sustainably is the focus upon which all other pillars are interlinked. It focuses on one's relations with others and the social and natural environment. This requires not only tolerance and respect for other cultures, religions, animals and plants, but also the need for understanding our common and shared values related to bio-cultural diversity, social justice, equity and peace.

Learning to know is a type of learning that focuses on knowing oneself and others' cultures, beliefs and ways of knowing and thinking as well as the interdependence of humans with their natural environment. It encourages knowledge construction rather than the mere acquisition of prescribed knowledge through critical reflection and paying equal importance to all forms of knowing- tacit, lay and intellectual knowledge.

Learning to do is a type of learning that turns people able to act creatively and responsibly towards the social and natural environment. How one acts and responds to others and the natural environment necessitates an action competence that enables people to deal with the complexity of social and natural world. Teaching and learning to do involves being able to think critically, systemically and to envisioning alternative ways of being and doing.

Learning to be is a type of learning that focuses on self-actualisation, self-fulfilment and be empowered for acting towards being rather having. This learning pillar is close to Erich Fromm's (1976) seminal work "To Have or to Be", where he argues that two ways of existence are competing for 'the spirit of mankind' - having and being. The having mode looks to things and material possessions and is based on aggression and greed. The being mode is based in love and is concerned with shared experience and productive activity. The dominance of the having mode is bringing the world to the edge of disaster (ecological and social) while the dominance of the being mode is bringing a harmonious co-existence between humans and their environment. He argued that only a fundamental change in human character "from a preponderance of the having mode to a preponderance of the being mode of existence can save us from a psychological and economic catastrophe" (Fromm, 1976: 165).

Learning to transform oneself and society refers to the type of learning that turns knowledge to praxis through a cycle of reflection, thought and action. This necessitates the development and application of critical consciousness that recognises the need to transform one's unsustainable values and practices and the oppressive elements and structures that lead to such values and practices.

Connecting the Earth Charter with the five pillars of learning

The Earth Charter provides a very broad perspective on learning to live together sustainably and thus is helpful for educators who wish to develop a comprehensive approach to education for sustainability (Harding et al., 2010). It looks holistically into the four pillars of sustainable development: environment, economy, society and culture. In this sense, it bridges issues such as social justice, non-violence and peace, which are often overlooked in educational frameworks for sustainable development. The Earth Charter is a value-based document that presumes virtuous action by individuals, schools, corporations and nations (Preston, 2010). The virtues that support this formation include compassion, cooperativeness, intergenerational justice and stewardship (ibid.). The Earth Charter can be used as a tool and framework to help teachers and students to clarify their perspectives and challenge some of their views about learning to live together sustainably (ECI, 2005). The need to essentially change our unsustainable value systems in order to make the essential transition to sustainable lifestyles is addressed by the Earth Charter, not only in theory, but also through an extended resource of concrete examples, lesson plans and learning objects (e.g., Matarazzo-Neuberger & Filho, 2010; Mathar, 2010; Sheehan & Laitinen, 2010; Vilela et al., 2005). Adopting the Earth Charter does not, by any means, require the homogenization or standardization of cultures or beliefs; it encourages people to identify and refine their own beliefs and then recognize the common interests and concerns they share with others (d'Evie & Glass, 2000). There is, however, the danger of using the Earth Charter in a doctrinaire manner, which could undermine its promise (Ruiz, 2010).

The Earth Charter Preamble lays out the critical environmental, social and economic challenges that confront humanity, highlights the choices we must make in order to built a more just, sustainable and peaceful world and stresses that "we must realize that when basic needs have been met, human development is primarily about being more, not having more" (learning to be). The Earth Charter draws attention to the additional responsibility, understood as a capacity to respond effectively, that derives from possessing greater power, wealth, knowledge and freedom. Those in more privileged situations must assume greater responsibility for promoting sustainability, including assisting those in less privileged circumstances (learning to be). This implies that education processes, drawing upon the Earth Charter through critical reflection, can help discern ways in which human potential can be realized. This is a 'caring' lifestyle orientation that education processes can help to clarify using the Earth Charter as a tool for critical reflection and for responsible action (learning to do). Many other principles have specific educational implications. For example, Principle 8 calls for the need to "advance the study of ecological sustainability and promote the open exchange and wide application of the knowledge acquired" (learning to know and learning to do).

The Earth Charter provides an integrated definition of peace based on harmonious relationships with oneself, with human communities, and with the biosphere (learning to live together sustainably). This holistic definition can serve to foster positive change based on our need to contribute meaningfully to the common good (learning to transform). The second main section of the Earth Charter brings together a set of action-orientated principles necessary to promote ecological sustainability and transformation to more sustainable ways of thinking and practices (learning to transform oneself and society). The Earth Charter can serve as a framework for people and organizations to critically reflect and compare their reality with their ideals as

well as with the realities of the others. This kind of analysis in turn provides the basis for identifying action goals for bringing about positive transformations at the individual and societal levels (learning to transform oneself and society).

As pointed by Clugston (2010, p. 158) the Earth Charter challenges us to ask some difficult questions:

- How can we create conditions so that the soon to be 9 billion humans can lead decent, healthy, productive lives, while enhancing biological and cultural diversity and preserving opportunities for future generations to live full lives?
- How can we create a financial system that respects and cares for social and environmental wellbeing as well as economic growth, and no longer discounts the future?
- How can we live in a way that all can live, eliminating poverty and violence and 'awakening a new reverence for life, the firm resolve to achieve sustainability, the quickening of the struggle for justice and peace and the joyful celebration of life'?

Integrating the Earth Charter in the ICT in ESD Masters Programme

The ICT in ESD Masters Programme

The online joint ICT in ESD Masters programme was designed and interpreted in a four-stage process: 1) design of course syllabi; 2) learning content design; 3) course structure design and 4) web design. These processes provided the foundation for the course modules development exemplified in the development phase (Makrakis & Kostoulas-Makrakis, 2012). A critical decision was made for the structure of the course curriculum which merged vertical and horizontal modes of course curriculum design. The vertical integration ensures continuity and structures the content in sequence from core to more complex and to specified streams. This provides a clear picture to learning, as students are able to understand how the content is developed and organised in the course. The vertical integration also assumes that the discrete courses may combine content from two or more subject domains. The horizontal integration brings about more breadth of curricular contents of different disciplinary areas and knowledge domains, especially through an interdisciplinary approach within the course areas. In this sense transformative learning cut across all the five competences (learning to know, learning to do, learning to live together, learning to be and learning to transform oneself and society) and thus it requires infusion among the disciplines, the university and the wider community. An interdisciplinary approach always consciously combines two or more subjects, while it keeps them distinct and in focus. Horizontally, the courses were built conceptually upon five main themes: Sustainability Theory; Educational Research; ESD pedagogy; Educational Policy and Leadership; and Information & Communication Technology (ICT). The emphases were on: 1) inter/cross-disciplinary content by merging concepts from the main themes and 2) multidisciplinary content by integrating multiple teaching methods and learning technologies. In this context, ICTs and ESD form the integrating "backbone" across all course contents. The design of the online curriculum components departed from the students' needs that were contingent on the needs analysis processes. Twelve course syllabi were developed, with 10 ECTS weight of each one (Table 1).

Table 1. The course structure of the Master Programme

PROGRAMME OF STUDY	ECTS
Year 1 Semester 1	30
Sustainability Theory, Systems Thinking and Transformative Change	10
Approaches to Educational Research for Sustainable Development	10
ESD Pedagogy and ICT	10
Year 1 Semester 2	30
Appropriate Technology, Active Citizenship and Education for Sustainable Development	10
Action Research and Participatory Action Research for Sustainable Development	10
ICT, Instructional/Learning Design and Education for Sustainable Development	10
Year 2 Semester 1 (to be chosen 3 out of 6)	60
Educational Policy and Planning for Sustainable Schooling	10
ICT, Climate Change and Geo-spatial Tools	10
Bio-cultural Diversity and Education for Sustainable Development	10
e-Learning, Virtual Worlds and Education for Sustainable Development	10
Teaching to Live Sustainably through the Earth Charter	10
Sustainable Leadership, Inter/Cross Cultural Communication and Planning for Sustainability	10
Year 2 Semester 2	30
Dissertation	30
Total for the Master degree needed	120

The integration of the Earth Charter in the course design

Why the Earth Charter?

Learning to live together relates to diversity. For learning to live together sustainably, the issue of diversity must be understood as a motivating factor in all life systems, and not just a matter of cultural politics. If diversity is the generative force in biological as well as cultural systems, as Martusewicz & Edmundson (2004) state, it must be concerned with the development of democratic and sustainable communities. The Earth Charter in this sense as a tool for learning to live together sustainably moves beyond the limits of environmental education or multicultural education. The Earth Charter lays out the fundamental principles and practices underlying the four pillars of sustainable development where the cultural ecological perspective necessitates the development of eco-ethical consciousness as a core for learning to live together sustainably. Eco-ethical consciousness should be thus defined as the awareness of and ability to respond carefully to the fundamental interdependence not only among all forms of life on the planet but also among all forms of living and non-living creatures (Martusewicz & Edmundson (2004 p. 2-3). This way of thinking requires what Griffin (1996) calls "a collaborative intelligence", the recognition that human

intelligence is part of a vast and complex system of reciprocal relations where the sense making processes that lead to human cultural forms cannot be separated off from the patterns of communication within the natural world, whether living and/or non-living. In this perspective, the whole Earth, including all forms of living and non-living creatures, is seen as highly dependent upon a sustainable way of being.

As pointed earlier, the curriculum development approach adopted in this Masters Programme merges a vertical and horizontal strategy. In this context, the Earth Charter concept was integrated vertically as a distinct course entitled "Teaching to Live Sustainably through the Earth Charter" and horizontally the Earth Charter was integrated in various courses through activities. The overriding goal of this course is to explore the links between Education for Sustainability and the Earth Charter and to develop the requisite knowledge, skills and attitudes to enable course participants to effectively use the Earth Charter as an educational tool. The specific objectives of the course include:

- The provision of a course of study which allows for a detailed exploration of the Earth Charter, its aims and objectives and its link to ESD.
- The use of the Earth Charter in understanding the impact of personal decisions on local, regional, national and global sustainability.
- The development of knowledge, skills and attitudes in course participants in order to raise their awareness and understanding of alternatives to current practices that impact long-term sustainability.
- The development of ICT-enabled instructional materials and programmes which will foster the formation of positive values, attitudes and ethical behaviour towards sustainable human development.
- The generation of new instructional materials that can be used to evaluate and change personal life goals to move toward more sustainable living.

On the completion of this module students should be enabled to:

- Understand the key vision and mission of Education for Sustainability as expressed through the values, principles and ethical approach contained in the Earth Charter. In particular, students will be conversant with the 4 key Principles of the Earth Charter and possess the skills to develop classroom/training interventions that support the development of sustainable practices among their students/trainees.
- Understand and cogently discuss the principles of sustainability through a study of the values necessary to achieve sustainability. This will be achieved through a study of the principles underlying values, the identification of values in The Earth Charter and the significance of common core values that impact on ethical decision making in relation to building a more just, sustainable and peaceful world.
- Utilise the Earth Charter as an ethical framework to assess different aspects of sustainability and make informed decisions for the future.
- Identify sustainable practices with regard to the environment, society and the economy through analysis of the key principles of the Earth Charter and use this identification to develop classroom discussions, videos, scenarios and group-work.

The Earth Charter course modules structure

Based on the course syllabus, seven course modules were designed and developed, following-up a template developed for that purpose. In total, seven course modules were developed, structured as following.

Module 1: Understanding Self and Others
Unit 1.1: Why self understanding
Unit 1.2: Understanding others by understanding the self

Module 2: Introduction to the EC, Ethics and Values
Unit 1.1: Origin, history and development of the Earth Charter
Unit 1.2: The Earth Charter and eco-pedagogy
Unit 1.3 The 4 principles of the Earth Charter, their ethics and values
Unit 1.4 Personal Ethics and Values

Module 3: The EC in political discourse, EU educational policy and citizenship education
Unit 2.1: The EC in political discourse
Unit 2.2: The EC and EU educational policy
Unit 2.3: The EC and citizenship education

Module 4: The Earth Charter as an Ethical Framework for Learning to Live Sustainably
Unit 3.1: Values education and learning to live sustainably
Unit 3.2: The EC as an ethical framework for learning to live sustainably
 Unit 3.3: Learning to reflect on personal values and practices

Module 5: The Earth Charter as a Pedagogical tool for learning to live sustainably
4.1   Using the EC as a teaching and learning tool
4.2: A four-dimensional model of EC as a teaching tool

Module 6: Good Practices of EC in teaching and learning for sustainability
Unit 5.1 Case 1
Unit 5.2 Case 2

Module 7: Developing EC-based lesson plans transforming the world
Unit 6.1: Learning technologies, transformation and the EC
Unit 6.2: Steps to developing quality lesson plans
Unit 6.3: Applying the EC in the teaching/learning process enabled by ICTs.

As a strategy, the focus was based on developing activities that integrate a number of key pedagogical principles that are inherent in the ExConTra (Experiential-Constructivist-Transformative) learning model (Makrakis & Kostoulas-Makrakis, 2012). These key pedagogical principles are the following:

Knowledge is personally and collectively constructed

Through the provision of learning activities for students to direct their own learning, the course modules provide space for the students to control their learning process in order to construct their own understanding and knowledge on self and nature. In the course modules the learners can negotiate a study topic, either from a suggested list or from their own research. These topics provide the impetus for discussion about key issues, related to the Planet Earth. Web 2.0 technologies used as scaffolding means are capable of supporting innovative social and participatory pedagogies, through enabling synchronous and asynchronous conversation, reflexive dialogue and collaborative content generation. Used appropriately, these tools can shift control to the learner, promoting in this way learner self-regulated learning, agency and engagement in ESD-oriented learning.

View the others and the world from multiple lenses and perspectives

The course modules provide learning experiences which encourage students to look beyond their own view. Multiple lenses and perspectives are being facilitated through engaging students from diverse socio-cultural backgrounds enabled by social networking tools to discuss issues related to using Earth Charter resources and tools for learning to live together sustainably. The socio-cultural process experienced by these students through such activities and tools may help to negotiate the direction of the collaborative learning interactions and to get involved in a process of values clarification that will ultimately contribute to understanding self and the others. In general, students have the choice to select material with which they can find meaning and for which they can associate with their local environments and personal interests. Through such experiences, what is learned and how it is learned turn to be vehicles for understanding themselves and the world.

Learning is an inherently social-dialogical process leading to praxis

Social networking through the learning environment and the activities provided in the course modules is a key feature not only because of the nature of the Masters programme but also of the fact that students are expected to be geographically isolated. It is through social networking technologies, including synchronous and asynchronous modes of communication and interaction that the students will be able to develop the pedagogy of learning to live together sustainably through the Earth Charter. Through social-dialogic processes driven by reflective practice and enabled by ICTs, students can experience personal change that collectively can lead to social transformation towards sustainability. Such processes are envisioned to develop eco-justice consciousness and commitment to social change.

Contextualise knowledge and learning

Contextualisation of learning occurs when the content of the curriculum, the methods and the materials used are related directly to the experience and environment of the learner. Students in dealing with ESD are involved in a) **reflective practice**, where they are reflecting on their own practice and b) **reflexive practice**, where they are reflecting, reviewing and changing in response to contextual factors and improved understandings of their practice. Learning activities developed in the course are providing an authentic context for learning where knowledge can be applied. The course does this particularly well through engaging students in dealing with problems that concern their local communities. Sustainability issues and resources offer unique

opportunities for contextualising teaching and learning, especially through the use of communication tools.

Concluding Remarks

This paper presents the instructional/learning design of a course entitled "Teaching to Live Together Sustainably through the Earth Charter". This course is part of a curriculum of an international joint Master degree programme in the field of ICT in Education for Sustainable Development. The integration of the Earth Charter in the Masters programme is justified by the fact that the Earth Charter provides a very broad perspective on learning to live together sustainably and thus is helpful for educators who wish to develop a comprehensive approach to education for sustainability. The course design on "Learning to Live Together Sustainably" has been developed for use on a global level and yet flexible enough to be interpreted within different cultural and social contexts. It looks at underlying values of education for sustainable development and the need to reorient education systems, policies and practices in order to empower people in learning to live together sustainably. In this sense, the Earth Charter was integrated vertically as a distinct course and horizontally in various courses through activities.

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Nelly Kostoulas-Makrakis, Ph.D is Assistant Professor in Teacher Education Department at the University of Crete, Greece. She graduated from the University of Athnens, Greece and did her doctoral dissertation at the University of Stockhoolm, Sweden. Her teaching and research interests focus on Education for sustainable development pedagogy. She is the author of 3 books and several articles. She is also the focal point for the Earth Charter Hellas. E-mail: nkostoula@edc.uoc.gr