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Pedagogy of Happiness
Towards An Unconventional School

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A Methodology for Developing a Sustainability Justice Curriculum: Turning Teachers Able to Act as Agents of Change

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Abstract

*Climate change, poverty, hunger, economic disparities, species extinction, racism, violation of human rights, etc.- all of these global issues demand one thing: sustainability justice. Being concerned about sustainability justice also involves being able to transform curriculum in light of sustainability literacy, principles, ethics and values. Several questions arise from this vision: why is sustainability justice an issue in curriculum and education? What do we mean by sustainability **justice**? Why should we be concerned with sustainability justice? What does a sustainability-justice curriculum mean? How to pursue sustainability justice in curriculum? In this paper, sustainability justice is introduced along with the DeCoRe plus methodological approach to help pre-service and in-service teachers embed sustainability justice in school curricula.*

Key words: Sustainability justice, Agent of Change, environmental justice, communication, collaboration

The Sustainability Crisis

Humanity is confronted with complex, interconnected social, economic and environmental problems locally and globally, such as climate change, poverty, hunger, economic disparities, species extinction, racism, violation of human rights. The crisis of sustainability includes not only environmental issues, but also economic, social and cultural issues. It is not just our top environmental, economic and social challenge; it is also a cultural challenge, a personal and moral one (Makrakis, 2014; Makrakis & Kostoulas-Makrakis, 2014). In other words, it is a crisis that traces its origin in the way world leaders confront economic and human development and the way people,

mostly in the economically developed world treated the environment as the following statistics show.

- The wealthiest 20 percent of the world's population consume more than the 80 percent of the world's resources, while the world's poorest 20 percent are left with 1.5 percent (World Bank, 2008).
- Over 1 billion poor people in developing countries live on \$1.25 a day or less. About 805 million people of the 7.3 billion people in the world, or one in nine, were suffering from chronic undernourishment in 2012-2014, mostly in less developed countries (World Bank, 2013).
- In 2011, it is estimated that malnutrition is a cause of 3.1 million child deaths annually or 45% of all child deaths in 2011 (Black et al. 2013). There are also 11 million people undernourished in developed countries (FAO, 2014).
- Every day, 16,000 children die from hunger-related causes; one child every five seconds.
- In 2013, about half of all stunted children lived in Asia and over one third in Africa (UNICEF, 2015; UNICEF et al. 2014).
- Basic education for everyone in the world would cost six billion dollars, and water and sanitation for everyone nine billion dollars, while annually, US Americans alone spend eight billion dollars on cosmetics and Europeans spend eleven billion dollars on ice cream (Peters, 2014).
- Together Europeans and US Americans spend seventeen billion dollars annually on pet food. While providing reproductive health care for all women in the world would cost twelve billion dollars and basic health and nutrition for everyone in the world would only cost thirteen billion dollars (Peters, 2014). Added to that, defence expenditures are approximately \$781 billion a year, contrasted to \$7 billion more per year needed for education over the next decade, despite the powerful role and benefits of investing in educating people (UNICEF, 1999).

Education systems, at all levels, and especially higher education and teacher education institutions bear their own responsibility for this crisis, as they have educated a leadership and most of the population who have contributed to the above described state of the planet. This has been done either through their decision-making power and/or non-sustainable behaviour that lacks sustainability justice.

What is Needed

Despite the need for reorienting university curricula to address sustainability (Makrakis & Kostoulas-Makrakis, 2013ab), the sustainability crisis raises considerable questions to educational systems. Criticism focuses on the teaching, learning and curriculum approaches adopted and the educational philosophies that underpinned them. There is a broader consensus of the need for a shift to an alternative educational paradigm that alters:

1. Our way of being in the world (learning to be);
2. Our way for discovering others by discovering ourselves (learning to live together);
3. Our way of learning how to learn as well as appreciating all sorts of knowing (learning to know);
4. Our way of putting knowledge into action (learning to do);
5. Our way of approaching the marginalised and those living at risk (learning to give & share) and
6. Above all, to deconstruct and transform our problematic frames of references—sets of fixed assumptions, habits of mind, meaning perspectives and mindsets that led to the current sustainability crisis (learning to transform oneself and society).

In its 1996 report to UNESCO entitled "Learning: The Treasure Within", the International Commission on Education for the 21st Century argued that education should be based on four fundamental pillars of learning- learning to know, learning to be, learning to do and learning to live together, which "provide maps of a complex world in constant turmoil" as well as "the compass that will enable people to find their way in it" (Delors et al. 1996, p.85). At a later stage, the 5th pillar of learning to transform oneself and society was added by UNESCO. Makrakis & Kostoulas-Makrakis (2015; 2014) introduced the 6th pillar of 'learning to give & share' in order to respond to the quest for merging volunteerism, social activism and learning (Fig.1) as defined in Table 1.

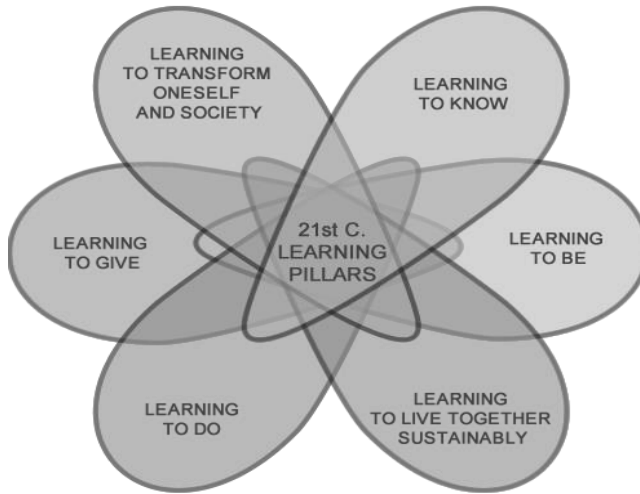


Figure 1. 21st century learning pillars

Table 1. Definition of the 21st century learning pillars

Learning to know	This type of learning concerns all the processes and practices that lead people to experience construct and transform knowledge for making sustainability a mode of life and being.
Learning to be	This type of learning concerns all the processes and practices that lead to human self-actualization, self-understanding, self-regulation and cultivating a sense of being versus having.
Learning to live together sustainably	This type of learning concerns all the processes and practices that lead to a peaceful and non-discriminatory society and human co-existence with the natural world.
Learning to do	This type of learning concerns all processes and practices that lead to merging knowledge with action for building a sustainable future.
Learning to transform oneself and society	This type of learning concerns all the processes and practices to transform their unsustainable values and behaviours and collectively engage to change society towards sustainability.

All of these global and at the same time local issues depicted in the statistics previously presented demand answers to the following critical and often not posed question: Are we preparing students to challenge the sustainability injustices reproduced and perpetuated through an unjust growth-oriented global model? To-date, the issue of 'justice' is of the most critical importance within the context of the current state of the planet. My argument is that the issue of justice is of the most critical importance in dealing with the sustainability crisis. It is, thus, reasonable to introduce the concept of "Education for Sustainability Justice" (ESJ), as an alternative to "Education for Sustainable Development" (ESD), or, at least, to be used interchangeably. Such an alternative is seeking to place much emphasis on the ethics and praxis of education for sustainability justice. Sustainability justice reflects the four pillars of sustainable development- environment, society, economy and culture.

More specifically: The environmental justice component refers to the right of all people in the planet to enjoy an equitable, clean, safe, fairly treated and healthy environment as well as the right to social, economic and cultural wellbeing. It also addresses the ecological unity and the interdependence of all species (Bonorris, 2010). The social justice component addresses inequalities and injustices of all kinds, poverty, racism, violation of human rights. Social justice is simultaneously a goal, a process, and a stance (Grant & Agosto, 2008). As a goal, social justice denotes equality of opportunities and outcomes for all people. As a process, social justice addresses the confronting and dismantling of oppressive structures and systems, as well as all other sorts of social inequalities. Finally, taking a social justice stance means embracing the need for change as well as on one's commonsense assumptions about the way things are. The economic justice component addresses the issues of unfair trade, economic exploitation, the unequal distribution of wealth, racism and poverty. Finally, the cultural justice component encompasses all the other three components of sustainability justice in the same way as it does to the three sustainable development pillars. In this sense, all conceptions of justice are cultural since our culture is the source of values, beliefs, traditions and other bodies of knowledge from which we draw our views as to what is just.

Transforming School curricula: The DeCoRe plus Model

The growing centralization of education in Greece has resulted in curriculum being conceptualized as a predesigned means to an end. Although, various ideologies influenced this process in the last three decades, the centralization process dominated

curriculum development. Experts in pedagogy and curricula were appointed to form working groups constituted of experienced teachers to start formulating the structure and content of school curricula. There was complete absence of dialogic spaces in such a curriculum development process. There was also absence of any critique to the instrumental perspective adopted in curriculum development. In my critical approach to curriculum conceptualization in relation to sustainability justice, the issues of critical/reflexive conceptualization of curriculum, identity construction, and critical consciousness, become the driving forces for developing an ethical perspective to sustainability-just curricula. To enable pre-service and in-service teachers to develop the critical analytical tools and skills necessary to understand sustainability justice in curricula needs a sense of agency and capacity to confront with personal (inner) frames and external (outer) structures that obstacle sustainability justice.

In the second half of the 20th century, much of the discussion on skills needed was centered on the 3Rs - reading, writing and arithmetic. In the last decade, there is a shift to what has been termed as the 4Cs for workforce readiness in the 21st century - critical thinking & problem solving, communication, collaboration and team building, creativity and innovation (AT21CS 2012; Partnership for 21st C. Skills 2011; AMA 2010). However, Makrakis & Kostoulas-Makrakis (2014), argued that in a world of rapid change highly driven by new technologies and expansion of human knowledge, along with the current sustainability crisis that threatens the very existence of humankind, education must go beyond the focus on the 4Cs to what we term 10Cs, that could be enabled by ICTs (Figure 2).

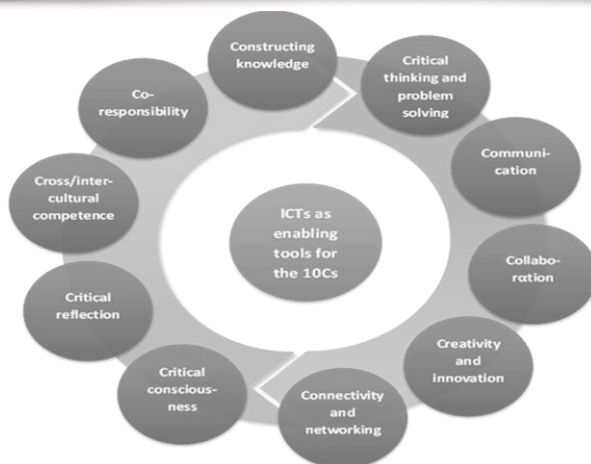


Figure 2. ICTs as enabling tools for the 10Cs

Each one the 10Cs has its own role in teaching and learning for problem solving. For example, critical thinking and problem solving refers to the ability to make decisions, solve problems and take appropriate action, using learning processes such as conceptualizing, applying, analyzing, synthesizing and/or evaluating information gathered by multiple means. Communication refers to the ability to synthesize and transmit ideas in both written, oral and virtual formats. Collaboration refers to the ability to work effectively with others using multiple communication means. Creativity and innovation refers to the ability to apply new ideas in developing innovative applications and solutions. Wikis, such as Wikispaces, WikiQuESD (Makrakis 2012; 2010), and the latest versions of Pixie, Frames and Share include collaboration options that allow synchronous collaborative learning. Blogging is another means for virtual communication (e.g. Edublogs, Blogger and WordPress). Mind-mapping and concept mapping tools can become a great collaborative way in reflecting, conceptualising, constructing and assessing knowledge (e.g. SpidrerScribe, Wise Mapping, ChartTool, Cmap, Creately).

These tools can boost learners' creativity and provide them with different ways to interconnect their thoughts as well as to accomplish metacognitive reflection skills. Similarly, tools for creating infographics (e.g. Wordle, Tableau and InkSpace) engage students in actively discovering connections and develop creativity. Connectivity addresses the complexity of the human-society-nature interaction, that can be signifi-

cantly enabled by ICT-driven networking means. Critical reflection refers to a complex process that strongly engages learners to critically reflect upon their reality, personal and social, and to transform it through action and reflection (Stanlick, 2014). Critical reflection goes beyond mere reflection, in that it requires the reflector to “deconstruct long-held habits of behaviour by looking beyond the behaviour itself to their own self-image and examining why they do what they do” (Silverman & Casazza, 2000, p. 239). In other words, when engaging in critical reflection you should expose your own basic assumptions and those of the community (society) in which you work, learn and live. Cross/inter-cultural competence addresses learners' capacity to communicate, collaborate and work in multicultural and global environments. Co-responsibility refers to a culture of sharing that necessitates shifting to less ego-centric principles and practices. Critical consciousness or conscientization in Freire's (2000) terms denotes the process of developing a critical awareness of one's social reality through reflection and action. Constructing knowledge represents an attempt to shift from consuming information to constructing knowledge. All these critical 21st century skills enabled by ICTs merged with the 21st century learning pillars can be used to transform school curricula towards sustainability justice.

Based on thorough research and long-time teaching experiences in the field of teacher education driven by the above pedagogical conceptions, I have advanced the DeCoRe plus methodology that aims to help prospective and in-service teachers to embed sustainability justice in school curricula. DeCoRe plus is the abbreviation of Deconstruction-Construction-Reconstruction that forms the core constructs supplemented by the processes of Diagnostic Evaluation, Implementation and Summative Evaluation. The theoretical underpinning of the DeCoRe plus methodological approach derives from critical social theory, critical pedagogy and postmodern conceptions of teaching, learning and curriculum (e.g. Giroux, 2002; 2006; Derrida, 2006; 1984; Mezirow, 2003;2000;1991; Freire, 2000; Habermas, 1990ab). Although the six processes follow a linear order (Table 1), in practice each process is closely interconnected with the other, forming a whole (Figure 3).

Table 1. The DeCoRe plus processes

DeCoRe+ Processes	Key concepts in each process
Diagnostic Evaluation	Reflecting on: a) who we are; b) what we have (existing knowledge); c) where we want to go; and d) why we want to go there.
Deconstruction	Analysing critically the functioning of personal perspectives/habits of mind and chosen curriculum units/modules.
Construction	Gathering resources, creating ideas and constructing new meaning (perspectives).
Reconstruction	Integration of new constructed knowledge in line with the reconstructed frame of reference.
Implementation	Carrying out the reconstructed curriculum unit/module supplemented by service learning.
Summative Evaluation	Reflecting and evaluating on what has been learned and changed.

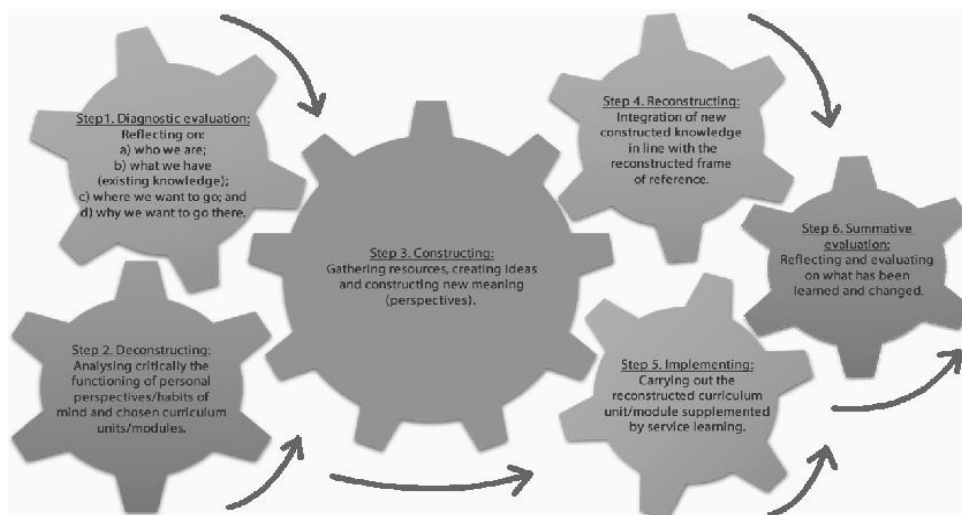


Figure 3: The DeCoRe plus interaction

The DeCoRe plus Organizer: Deconstructing, Constructing and Reconstructing a Curriculum Unit/Module

This is a template that functions as an organizer for applying the DeCoRe+ methodological approach to curriculum that has been used in relevant courses for pre-service and in-service teachers

Name respondent:.....	
Curriculum Area:.....	Title of Unit/Module & pages
School Class:	Title of Subunit/lesson (pages)

DECONSTRUCTION PROCESS	
<i>1. UNIT/MODULE CONTENT</i>	<i>Provide your detailed and critical answers</i>
1.1 What is the title, subject and recipients of the teaching/learning unit/module?	
1.2 What is the main idea?	
1.3 Where are the unit/module aims and specific objectives? Are the objectives clear?	
1.4 Is the content of the unit/module suitable to goals and objectives, with clear and understandable concepts, principles and ideas?	
1.5 Does the unit/module include dynamic activation elements that stimulate student interest?	

1.6 Does the unit/module include learning activities that create conditions for both the revocation of prior learning, and to build new knowledge?	
1.7 Are the learning activities connected with learning objectives?	
1.8 Are the learning activities connected with knowledge from other subjects/courses? If YES, specify what and how.	
1.9 Are the unit/module topics and learning activities related to real life and the four pillars of sustainable development (environment, economy, society and culture) and the values promoted? [Apply the indicative themes summarized in a reference table]. Which of the concepts and values you find in the text of the unit/module?	
1.10 Does the content of the unit/module and especially the learning activities relate to: 1) the six learning pillars for sustainable development (learning to know, learning to be, learning to live together, learning to do, learning to transform oneself and society & learning to give and share), and 2) the 10Cs?	

1.11 Are the learning activities integrated with problem-based learning strategies?	
1.12 Are values in the unit/module that are supposed to be taught but they are implicit?	
1.13 Does the unit/module reproduce the dominant ideology and the economic model of non-sustainable economic growth?	
1.14 What kind of knowledge interest is promoted in this teaching/learning unit/module? 1) technical/instrumental knowledge (information-knowledge); 2) practical knowledge (deep understanding of the subject); and 3) emancipatory knowledge (creating conditions for change towards a sustainable society).	
1.15 Is there a hidden curriculum designed? (That is, if learners are given the opportunity to learn concepts, principles, ideas and values that are not registered with the official curriculum). If YES, record and explain.	
1.16 Is there a zero curriculum? (That is, if there could be knowledge and activities considered necessary in this unit/module, but not included) . If yes, what prevents the learner to learn something that would otherwise be useful in learning about the	

specific teaching/learning unit/module?	
2. METHOD OF ASSESSMENT	<i>Provide your detailed and critical answers</i>
2.1 How are learners assessed?	
2.2 Do you think that the assessment methods reduce or limit the interest of learners to actively engage in the learning process?	
2.3 Are the concepts included in the teaching/learning unit/module assessed?	
2.4 Are concepts not included in the teaching/learning unit/module assessed?	
2.5 Is the assessment authentic? Does it include, for example, multiple modes of evaluation, quantitative and qualitative criteria? Are the assessment methods related with real life situations?	
3 GAPS, PURPOSEFUL OMISSIONS AND UNDERLYING ASSUMPTIONS	<i>Provide your detailed and critical answers</i>

3.1 What do you think is missed or silenced from the unit/module content? Why is it so? Give sound explanations and reasons.	
3.2 Which persons and things are purposefully omitted? Why?	
3.3 What questions are not raised? Why?	
3.4 What are the underlying assumptions of the teaching/learning unit/module?	
4. POWER AND INTERESTS	<i>Provide your detailed and critical answers</i>
4.1 What interests/views are raised in this teaching/learning unit/module? Why;	
4.2 What interests/views are hidden or silenced in this teaching/learning unit/module? Why?	
4.3 Are the alleged views in the teaching/learning unit/module objective and just?	
5. PROJECTED IMAGE AND REALITY	<i>Provide your detailed and critical answers</i>
5.1 What is the image of the world that passes through the teaching/learning unit/module?	

5.2 Which side of social reality is depicted?	
5.3 What is real and what is imaginary in the teaching/learning unit/module?	
5.4 What are the analogues of the subject in other places/areas?	
6. AUTHOR'S IMAGE	<i>Provide your detailed and critical answers</i>
6.1 What image does the reader form for the author/s of the teaching/learning unit/module?	
6.2 What values/ideas are espoused by the author/s?	
CONSTRUCTION PROCESS	
Based on the detailed and critical answers to the deconstruction process, start the construction process by recording the main points that need changes and describing your proposals which will be used in the reconstruction process.	
7. REPORT THE KEY POINTS THAT NEED TO BE DECONSTRUCTED IN EACH OF THE FOLLOWING DOMAINS AND PRESENT YOUR SUGGESTIONS	<i>Elaborate your key points and suggestions based on the following table organizer of critical reflection</i>
7.1 Content	
7.2 Evaluation Methodology	
7.3 Gaps, purposeful omissions & underlying assumptions	
7.4 Power and interests	

7.5 Alleged perspective/reality	
<p>CRITICAL REFLECTION</p> <p>Reflect on what is needed to support the following four domains</p>	
<p>Interactive Teaching/Learning</p> <p>[Give a short description of the ICT tools, multimodal texts, learning styles, repositories of learning material and tools, classroom organization]</p>	<p>Learning pillars and 10Cs</p> <p>[Give a short description of how you will integrate the six learning pillars and 10Cs following an interactive teaching/learning process dealing with authentic problems]</p>
<p>Teaching/learning approaches</p> <p>[Give a short description for the integration of interdisciplinary and problem-based learning approaches, giving due emphasis on student-centered learning, cooperative learning and transformative learning, etc.]</p>	<p>Authenticity</p> <p>[Give a short description of how the key concepts and new learning activities are related to real life, experiential and social learning, active citizenship]</p>

RECONSTRUCTION PROCESS

RESPONDENT NAME: _____ **SCHOOL CLASS:** _____ **CURRICULUM AREA:**

NAME OF UNIT/MODULE: _____ **TITLE OF SUBUNIT:** _____
TIME DURATION: _____

CONTEXT/ACTIVATION

Write the general goals of the unit/module:

Describe what kind of previous knowledge you will use in teaching the reconstructed unit/module:

Describe the characteristics of learners (e.g. skills, values, knowledge, attitudes, action competences) that will contribute to the learning outcomes:

Describe what kind of teaching/learning activities you will do to activate your learners and how you will investigate: a) what learners know on the subject; b) what they want/need to learn and c) how they want/need to learn:

SPECIFIC OBJECTIVES: Write down what learners should be able to do after the end of the lesson unit/module (1, 2, 3...)

The learning outcomes should be learner-centred or learner-driven and include all categories of learning processes and cognitive skills. It is important that learning outcomes can arise from both the activation process and the learning activities across all lesson phases. The co-formulation of the specific objectives of the course is a prerequisite for a learner/learning-centered teaching approach. This means that the specific objectives can be partially modified

and/or supplemented during the implementation phase of the reconstructed unit/module.

CONNECTIVITY

Interdisciplinarity:

Try to connect your unit/module with at least two different subjects of the curriculum. To help you in understanding the rationale and the process for the interdisciplinary approach of your unit/module, fill in the Interdisciplinary Approach Organiser in the Annex. Indicate the involved curriculum areas (e.g., Language, Mathematics, etc.):

Explain how each specific objective is associated with these curriculum areas, identifying the specific content with reference to the relevant unit/module, learning purpose and page. The interdisciplinary approach leverages a holistic perspective in knowledge construction.

Education for sustainability justice:

Describe the connection of the unit/module and learning outcomes with reference to the six learning pillars: learning to know to be, to live together sustainably, to do, to transform myself and society and to give/share.

Describe the connection of the unit/module and learning outcomes with the themes covered in the four pillars of sustainable development (environment, society, economy, culture) with particular reference to climate change, as evidenced by the deconstruction and construction process.

Describe the connection of the unit/module and learning outcomes with of the 10Cs, taking into account the deconstruction and construction process:

Asses LEARNING MATERIAL AND RESOURCES

- Describe what is needed in terms of learning materials, digital sources, web-based tools, and other ICT tools:
- Do not forget to cite the references of all your sources:

ORGANIZING YOUR CLASS

- Explain how you are going to organise your class for carrying out successfully the reconstructed learning unit/module with the support of ICTs:

PLAN OF AUTHENTIC ASSESSMENT

An Organiser of Authentic Assessment

Special objective number	Description of authentic assessment*	Connection with a level of cognitive skill **	Connection with learning activities by phase***

* An authentic assessment focuses on the evaluation of the learner's capacity:
 1) to apply knowledge and skills in situations - problems of the "real world"
 and 2) to generate ideas, construct new knowledge, use multiple ways of knowing holistically, consolidate knowledge, cooperate, and investigate.
 Therefore, it may include multiple modes and tools such as: conceptual maps, interactive learning activities, learning logs, autobiographies, tests, etc. Also,

authentic assessment is integrated in all teaching/learning phases at the diagnostic, formative and summative level.

** Indicate the category of skills.

*** Indicate the learning activity and the phase in which each specific objective (learning outcome) is connected. This column will be filled in when you have completed the activities in each phase. The activities will be numbered. For example, activity 1, phase 1, you will write in the column 1.1, etc.

PROCEDURES FOR IMPLEMENTING THE RECONSTRUCTED UNIT/MODULE ENABLED by ICTs

Describe the strategies and activities that will be used to implement the reconstructed unit/module, categorizing the process by phase and time duration. Take into consideration that assessment should be incorporated in phases and that there must be consistency with the table above. It should also be consistent in phases, starting from how to recall and use learners' prior knowledge (activation). Particular attention should be paid to the interconnectivity strategies and learning activities along the authentic assessment chart and the linkages to the interdisciplinary approach, the six learning pillars and the 10Cs.

Concluding Remarks

Typically, teachers and learners are expected to follow a prescribed curriculum that has been constructed by appointed experts in the field according to certain goals, specificities and ideologies. Contrary to that, my goal is to advocate that teachers must become able to deconstruct, construct and reconstruct the curriculum. Giving voice to teachers to function as sustainability justice curriculum developers empowers them to act as 'transformative intellectuals' and agents of change. Due to the space limit of the paper the focus was to describe the DeCoRe plus process of how to develop in pre-service and in-service teachers the required human agency to

transform who they and what they encounter as knowledge and not to provide a detailed account of the DeCoRe plus methodological approach to teaching, learning and curriculum. Nevertheless, I have presented some key points that give an overall outlook of its constructs, the goals and the underpinning educational philosophy.

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Integrating Sustainable Happiness in pre-Service Teacher Training Enabled through the Earth Charter Lenses

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Abstract

The complex nature of our global sustainability crisis is increasingly evident, locally and globally, hampering human wellbeing and happiness. Given the multi-faceted nature of well-being and happiness, one should not neglect the role of education in building what can be called 'sustainable happiness'. In this paper, we will explore how sustainable happiness can be enabled through the Earth Charter lenses. It will be argued that the Earth Charter has unique potentialities to incorporate a pedagogy of happiness. Particular emphasis will be given to: (a) discuss the concept of happiness in its relation to sustainability and the extent to which it can be integrated into teaching and learning; (b) provide a review of the Earth Charter lenses; (c) put forth arguments as to the possibility of promoting a pedagogy of happiness through the Earth Charter lenses; and (d) give some examples from pre-service students' experiences to the issue.

Key words: sustainability crisis, emotional, state, ecosystem, harmony, trust, participation

1. Defining happiness in the context of the sustainability crisis

We are living in a planet that faces a crisis which threatens its very existence. The crisis the planet faces reflects not only the degradation of the ecosystems and the extinction of most of natural living and non-living creatures, but also extends to social, economical and cultural issues. In other words, it reflects the four pillars of sustainable development. The complex nature of the planet's sustainability is increasingly evident, locally and globally, hampering human well-being and happiness.

Webster's online dictionary defines happiness as: a) a state of well-being characterized by emotions ranging from contentment to intense joy and b) a pleasurable or satisfying experience. In this definition the concept of well-being is a key to the state of happiness. However, the concept of happiness cannot be seen, solely, as a personal emotional state but also as a virtue and the ultimate meaning of human existence that extends to include an interconnection with the four pillars of sustainable development. In this sense, we can talk about the concept of "sustainable happiness", a new concept defined by O'Brien (2005) as happiness that contributes to individual, community and/or global well-being without exploiting other people, the environment or future generations (cited in O'Brien, 2010). O'Brien (2012) argues that sustainable happiness underscores the interrelationship between human flourishing and ecological resilience.

Thus, sustainable happiness and well-being are integral to building sustainable futures, and positive psychology could be increasingly influential in embracing and promoting sustainability and happiness. Positive psychology is the scientific study of what makes life most worth living, that is, increasing the level of human well-being. A number of scholars (e.g. Boniwell & Ryan, 2012; O'Brien, 2012; Brown & Kasser, 2005) argue that positive psychology will realize its most significant and far-reaching impact when it is applied to sustainability efforts, locally, nationally and internationally. Such application may accelerate shifts in attitudes, policies, practice and most importantly to sustainable behaviour that will ultimately lead to sustainable happiness. Such a conceptualization of happiness gives particular emphasis on sustainability and our interdependence with all forms of life on the planet as well as to the fact that each of us may contribute positively or negatively to the well-being of others and the natural environment.

However, we have not yet fully understood the meaning of happiness and its relationship to well-being, which is the ultimate force that may direct the path towards happiness and sustainable behaviour (Awasthi & Saxena, 2013). Taking into consideration McDonald's (2008) argumentation on sustainability and happiness, it seems that reaching consensus is largely constrained by the way happiness is defined by western and eastern philosophies. From a western perspective, happiness is seen mostly within the individual person and through this it fails to appreciate the inherently inter-connected nature of well-being. Contrary to that, happiness from an eastern perspective driven by collective cultural ideals, it is defined in a more holistic

way, giving due importance to the social and non-social worlds around us. As pointed by McDonald (2008, p. 44), "to see happiness as a merely emotional state that is somehow separable from other aspects of being is singularly naive. Happiness exists as a complex attainment that depends utterly on the cultivation of a wide range of integrated capacities".

The World Happiness Report 2012 has recognized that "Sustainable Development" combines human well-being, social inclusion, as well as environmental sustainability and have aptly stated that happiness is intimately linked to the quest for sustainable development. Similarly, the 2015 World Happiness Report aims to influence the UN adoption of Sustainable Development Goals (SDGs) that succeeded the Millennium Development Goals (MDGs). The development of Happiness Index provides a comprehensive measurement of progress that incorporates economic, social, health, cultural and ecological dimensions. At the same time, the concept of Gross National Happiness (GNH) contrasted to Gross National Product (GNP) has been seriously considered as a measure for sustainable development, first initiated by the government of Bhutan for over three decades designed to directly enhance people's happiness (Rosly & Rashid, 2015). Bhutan's happiness criteria encompass economic, environmental, physical social, mental and spiritual wellness (ibid). Brooks (2013) argues that the ideal of maximizing Gross National Happiness (GNH) exemplifies Bhutan's commitment to holistic development and links with arguments about the shortcomings of approaches that emphasize economic growth. However, as Brooks assumes while Bhutan's standard of living has increased, the country faces challenges, among them, their ability to manage rising consumption levels.

There is an increasing body of literature that shows the growing awareness and interest among governments and economists that Gross National Product (GNP) and other traditional metrics of economic progress have not fully succeeded in measuring the kind of progress that reflect the ultimate goal of making life happier and taking care of people's well-being. Hargens (2002) argues that Gross National Happiness (GNH) can be regarded as the next evolution in indicators for sustainable development, as GNH goes beyond measuring merely material values such as production and consumption, and instead it incorporates all values relevant to happiness. As McDonald (2010) argues, Gross National Happiness, in its classical formulation, rests upon four interdependent pillars, the so-called Four Pillars of GNH, namely:

1. Happiness is achieved through living in harmony with a thriving ecosystem that is valued in its own right.
2. Happiness must be in coherence with a vibrant and grounding culture that conveys on-going wisdom and an ethical sensibility to the nation.
3. Happiness depends on material economy as it provides for basic necessities and eases burdens.
4. Happiness needs good governance which provides a transparent and dedicated civil service that acts to harmonise all of these ends in the most practical way.

2. Educating for sustainable happiness

Mahatma Gandhi stated, “If we are to reach real peace in the world . . . we shall have to begin with children” (cited in Weil, 2015). This implies that school education is of the most critical social institutions that would propel us towards building a more sustainable world. Michalos (2008) has posed the question: ‘Does education influence happiness and if so, how and how much?’ His answer was that it depends on how one defines and operationalizes the ideas of ‘education’, ‘influences’ and ‘happiness’. So, if ‘happiness’ is understood in the robust eudaemonist sense of overall human well-being, then education evidently has an enormous impact. Veenhoven (2010) has not found any significant pattern among the two variables - education and happiness, within developed countries. He provides two explanations: 1) the effect of education attainment on happiness may be not linear and it loses significance after some threshold and 2) education entails a cost in subjective well-being terms that eventually exceed benefits. Almost a decade earlier, Helliwell (2003) also found that education attainment was not clearly associated with life satisfaction. However, he went further and noted that education does actually affect life satisfaction indirectly through income, health, perceived trust and social participation. In general, there is contradictory evidence regarding this relationship.

Contextualizing education for sustainable happiness, where the criteria combine both subjective and objective measures, could give us a better idea of this relationship. O' Brien (2010) argues that sustainable happiness can be incorporated into any area of the curriculum as well as school policies and practice. I could argue that if education for sustainable happiness is learner-driven in learning environments that encourage deep reflection and transformative pedagogical conceptions, the relationship of education and happiness, might be more meaningful and rewarding. To educate for sustainable happiness is not solely to educate the individual to further

his/her own happiness, but to see individual life satisfaction with collective happiness. Such a kind of connectivity can enable individuals to see themselves as global active citizens for building sustainable happiness. This also necessitates the need to see education and learning not only from the formal education perspective, but in connection with all form of learning, especially social learning.

A re-orientation of teaching and learning practices towards transformative pedagogy is often called as the most needed to make an impact on people's lifestyles and behaviours and help build a sustainable future (Cloutier & Pfeiffer, 2015; Sterling, 2001). Transformative and critical constructivist learning inherent in radical views of sustainable education entails a shift of consciousness that can change one's unsustainable way of thinking, being and acting. Such a shift involves an understanding of one's self in the world; of relationships with other humans and the natural world; of the relations of power; of alternative approaches to living; and of the possibilities for social justice, peace and personal joy (O'Sullivan, 2003). In this context, a transformative learning model, I have developed and practised in my teaching with pre-service teachers at the Department of Primary Education at the University of Crete, has been found beneficial to education for sustainable happiness, especially if it uses the Earth Charter as an ethical and pedagogical framework.

The transformative learning model depicted in Figure 1 consists of four interactive stages: 1) getting started (reflection, activation, problem identification and problematisation, disorienting dilemma); 2) de(re)construction (reflection, reformulation, reassessment); 3) getting involved (reflection, knowledge construction, transformation); 4) learning-based change (learning by action, change). Following a radical sustainability perspective, the person is viewed as an active agent in a change process. In this process, participants were engaged in discourse and critical self-reflection, using some activating events and disorienting dilemmas, through which they come to critically examine their personal views, teaching practices and learning theories, open themselves to alternative views and practices and consequently drive them to change the way they view curriculum, teaching and learning (Kostoulas-Makrakis, 2013). According to Mezirow (2000), it often follows some variation of a number of phases, such as: 1) a disorienting dilemma; 2) self-examination with feelings of fear, anger, guilt, shame; 3) a critical assessment of assumptions; 4) recognition that one's discontent and the process of transformation are shared; 5) exploration of options for new roles, relationships and actions.

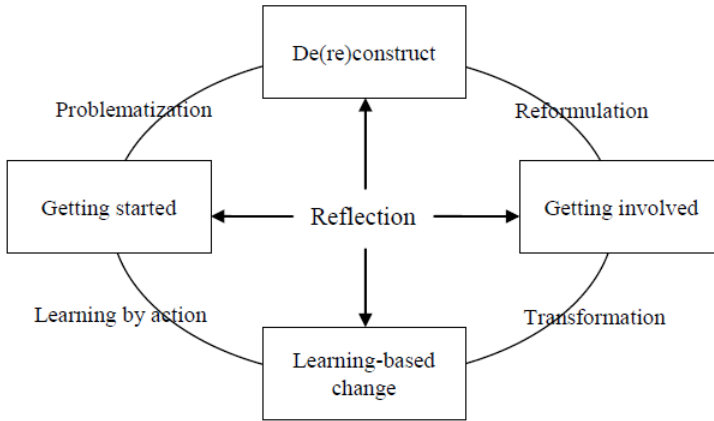


Figure 1. A methodological approach to infuse a radical view to education for sustainability (Makrakis & Kostoulas-Makrakis, 2010, p.21).

This model is underpinned by our attempt to bring together the main principles of the experiential, constructivist and transformative learning theories abbreviated as ExConTra learning paradigm (Makrakis & Kostoulas-Makrakis, 2012) depicted in Figure 2.

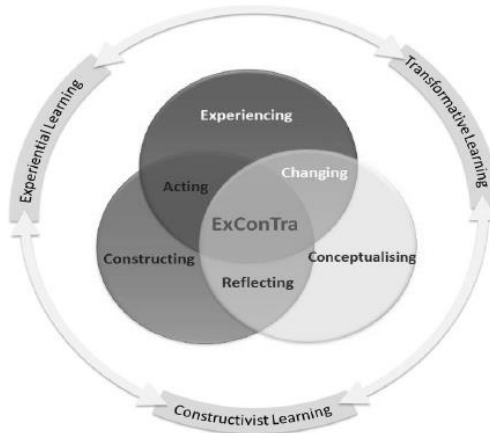


Figure 2. The ExConTra learning paradigm (Makrakis & Kostoulas-Makrakis, 2012, p.596)

Beginning with experiencing, learners identify a realistic and authentic task associated with a sustainable development issue, and start collecting the information needed for their analyses, using various inquiry-based methods. Through reflecting, self and/or social, as well as through further reading and observing, learners organize and examine the collected data for the new experience from a variety of perspectives in order to find and make meaning. For learners to make meaning, either individually and/or shared, they need to reflect on their own experiences, leading them to develop more abstract understandings of their experiences (conceptualizing). Arriving at individual and shared meaning (constructing), learners need to get involved in a meaningful learning and shared inquiry enriched through continuous reflection, re-conceptualization and active experimentation. Constructed knowledge and meaning is meaningful when it opens up opportunities for action. Merging knowledge and meaning with action (acting) leads to a change agency and active citizenship. Acting as agents of change, learners are empowered to transform experience through critical reflection and active experimentation. When critical reflection is transformed into an action it becomes praxis that turns learners able to transform oneself and society (transforming). To facilitate transformative learning, educators must help learners become aware and critical of their own and others' assumptions. Learners need practice in recognizing frames of reference and using their imaginations to redefine problems from a different perspective. In this sense, learning is a social process of effecting change in a frame of reference composed of real life habits of mind and a point of view (Mezirow, 2000; 2003). Frames of reference (cognitive, conative, and emotional) are the structures of assumptions through which we understand our experiences (ibid.). In summary, the ExConTra teaching and learning approach in the field of education for sustainable happiness attempts to turn experience, meaning making, knowledge construction and critical consciousness into praxis through critical reflection.

3. The Earth Charter: Connecting education for sustainable happiness and the 3Hs

The Earth Charter (<http://www.earthcharterinaction.org>) is an ethical framework for building a just, sustainable, and peaceful global society in the 21st century. It seeks to inspire in all people a new sense of global interdependence and shared responsibility for the well-being of the whole human family, the greater community of life, and future generations. It is a vision of hope and a call to action. The Earth Charter project began as a United Nations initiative, but it was carried forward and completed by a global civil society initiative. In fact, the Earth Charter is a product of a

decade-long, worldwide, cross-cultural dialogue on common goals and shared values that provides a very valuable educational instrument for sustainable happiness. It encourages us to search for common ground in the midst of our diversity and to embrace a global ethic based on the following principles:

I. Respect Earth and life in all its diversity

II. Ecological Integrity

III. Social and Economic Justice

IV. Democracy, Nonviolence, and Peace

In a previous article (Kostoulas-Makrakis, 2012) I attempted to connect the Earth Charter Preamble with Delors' (1999) four pillars of learning for 21st century. Thus, 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 build 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, according to McDonald (2008, p. 60), “speaks to the need for all to engage wisdom, compassion, self-restraint and generosity in our personal and professional lives in order that a collective, inter-related thriving can be secured”.

In my courses, the Earth Charter is being integrated as a pedagogical tool that matches well with the above described transformative learning methodologies. Bringing the dimension of education for sustainable happiness in this framework

proved a very fruitful and highly rewarded experience. Educating pre-service teachers to deconstruct the "business as usual" conception of viewing education mostly as a uni-dimensional abstraction, is separating the head, the heart and the hand. My assumption is that such a kind of separation could partly explain the contradictory evidence of the education and happiness relationship. Educating for sustainable happiness enabled by the Earth Charter is all about merging the 3Hs, that is the Head, the Heart and the Hand. Merging the Head, the Heart and the Hand responds to the need for adopting a holistic approach to teaching and learning to live together sustainably. The head is about cognitive function and being logical, while the heart is about affective functions, ethics, values, emotions, and feelings, and the hands are about human agency, that is the disposition and ability to act as agents of change. I have conceptualised the Earth Charter with the 3Hs, as it is depicted in the following Figure 3.



Figure 3. The Earth Charter joins the 3Hs (Kostoulas-Makrakis, 2014, p.92)

Such a merge gives due emphasis on learning to clarify one's own values that necessitates the process of introspection to critically reflect upon inner values and

knowledge constructions, which in turn are reflected in outer practices and behaviours. My teaching experiences show that when pre-service teachers are encouraged to expose their own values, assumptions, insights and biases, articulated and critically discussed in a humane and non-judgmental atmosphere, they are more prone to start a learning journey that integrates students' intellectual, moral, emotional and motivational potentials. When such learning spaces are created, pre-service teachers display meaningful insights for values clarification contrasted with external 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 (Kostoulas-Makrakis, 2010). Introspection gives people the chance to identify and evaluate their inner thoughts, feelings and desires through critical self-reflection. It is of particular importance to bring the heart in the fore as pre-service teachers explore their fears and hopes for the current state of the planet and start reflecting on their inner and outer worlds. The more challenging issue, involves asking pre-service teachers to examine the extent to which their own daily lives reflect the ideals and values possessed. A meaningful question to ask is: Are we personally acting in accordance with the ideals we espouse, or is there a considerable gap between how we act in everyday life and what alternatives exist if a happier future is to be achieved? There are many ways of asking such a kind of questions that demand both learning to know (Head), learning to give and share (Heart) and learning to act (Hand). One way of engaging pre-service teachers in critical reflection is to encourage them consider those who are excluded, marginalised or voiceless from the advantages of an affluent society and to express compassion, empathy and an attitude for giving and sharing. Such a critical reflective process is fuelled by the 'Head' driven by the "Heart" and actualized by the "Hand".

In this context, envisioning alternative futures seems to play a very critical role. It is of particular importance to get pre-service teachers involved in building the proper cognitive structures in their heads through reading and critique. I have found that a particularly valuable way to deepen understanding is to allow pre-service teachers to get engaged in inter/cross disciplinary approaches to the sustainability themes chosen for study. Envisioning a more inclusive, peaceful and just society as well as how we can reach such a society is very critical to education for sustainable happiness. Thus, when examining sustainable happiness through the Earth Charter lenses

and critical pedagogy, a number of specific questions are posed to students, in the beginning of the course, such as (Kostoulas-Makrakis, 2014):

- ✓ What would you like society to look like in the future? Thinking about the idea that you have no control over who, where, or what you may become. Imagine the type of world in which you would like to live.
- ✓ How this imagined world differs from the current world you experience, locally and globally? Now, take some time and think “Who is responsible for building this world you are living in? Reflect also on your personal contribution to it.
- ✓ What actions, personal and collective are needed to make that preferred future a reality?

4. Concluding remarks

Given the multi-faceted nature of well-being and happiness, one should not neglect the role of education in building what can be called 'sustainable happiness'. In this paper, the attempt was directed towards an emphasis on sustainability and our interdependence with all forms of life on the planet as well as to the fact that each of us may contribute positively or negatively to the well-being of others and the natural and social environment. Sustainable happiness can be incorporated into any area of the curriculum as well as school policies and practice, but its success depends largely on the educational philosophy that drives the teaching and learning process. My pedagogy derives from a transformative learning paradigm (Kostoulas-Makrakis, 2013) and the Earth Charter directed to the following four educational objectives: (a) helping students deal with the world's complexity of sustainability issues; (b) overcoming the dominant compartmentalization of knowledge into discrete entities that prevents interdisciplinary curricula; (c) helping students deconstruct their unsustainable perceptions, beliefs, and actions applying values clarification and critical reflection; and (d) promoting experiential and constructivist learning. Such educational objectives appear particularly relevant for education geared towards sustainable happiness. The best route to happiness is through active human involvement in building a more sustainable society for all people worldwide and all forms of life. The Earth Charter - an inspiring and visionary set of widely endorsed values and principles provides a comprehensive framework on how to build a just, happy and sustainable global society.

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