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Using the Earth Charter

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Introduction

The overall goal of the Decade of Education for Sustainable Development (DESD) is “to integrate the values inherent in sustainable development into all aspects of learning to encourage changes in behavior that allow for a more sustainable and just society for all”. A key question that often emerges is: *what are the values inherent in sustainable development* that could help us, as human beings, to realize the vision of sustainability?

Increasingly, more groups and individuals around the world are recognizing the Earth Charter as an empowering and practical source of these values. The Earth Charter resulted from a decade-long, worldwide, cross-cultural civil society dialogue to identify the widely shared values and principles of sustainability, and is being used as a values-based educational tool to guide humanity towards a sustainable future.

As a matter of fact, UNESCO, during its 32nd General Conference in October 2003, adopted a resolution recognizing the Earth Charter “as an important ethical framework for sustainable development”. The resolution affirms member states’ intentions to “utilize the Earth Charter as an educational instrument, particularly in the framework of the United Nations Decade for Education for Sustainable Development”. So, how is this being accomplished?

This publication has been envisioned to offer stories – case studies from around the world – that highlight how groups and individuals are using the Earth Charter as a tool for education for sustainable development. These stories come from non-formal and formal educational settings and describe a variety of experiences, including the development of guidebooks for primary school teachers, the inclusion of sustainability values in universities’ departments of education, law, engineering and general studies; the reshaping of local, regional and national curricula; and, the creation of vital and engaging programs and workshops for children and youth.

The richness and diversity of these stories demonstrate that the Earth Charter’s integrated approach can help to clarify the vision of a more just, sustainable and peaceful world at the same time as it broadens this vision. These stories also show that there is no single ‘right way’ of approaching this task – the methods used for bringing the values of sustainability into educational practices depend on the context, creativity and the level of engagement of those involved.

In the process of preparing this publication, a set of criteria were developed to select these stories which best responded to the purpose of the ‘good practices’ series, of which this publication is now a part. The following criteria were used for selecting the stories:

- *Are values-driven experiences that use the Earth Charter as a framework or tool*
- *Promote transformative learning – characterized mainly by:*
 - Promoting ‘learning’ more than ‘teaching’
 - Concentrating more on the construction of meaning than on communicating the message
 - Promoting the mutual transformation of teachers and learners
 - Focusing on local knowledge and community-based decisions and actions
 - Orienting learning more towards process than product/result

- *Use constructive and participatory methodologies*
- *Use multiple methods and integrative approaches*
Experiences that use interdisciplinary approaches to assess and address issues, drawing upon a variety of methods: writing, art, drama, debate, scientific analysis, etc.
- *Are context specific and action oriented*
Experiences where teachers and students (and/or community members) are learning about regional, national and global issues while carrying out actions through field trips, projects, and community service opportunities.
- *Are on-going experiences that can also offer 'lessons learned'*

This publication includes twenty-seven illustrative stories from countries around the world. Each one is written by a different author – a schoolteacher, community activist, youth worker, university member, minister of education, law professor, teacher trainer, art instructor – and each brings a different experience to light. To build some continuity in sharing these experiences an effort was made to organize the content of each story around three main sections: (1) A general description of the experience, including its objectives, duration, target group(s), and information about the leading organization(s) involved; (2) A detailed explanation of the methodological aspects and activities of the experience; and (3) A final section on the conclusions and lessons learned from the experience.

The stories in this collection share a common objective – to contribute to building sustainable societies. We hope that you will enjoy the wide variety of contexts, objectives and methodologies presented in this publication. Furthermore, it is our hope that these experiences will stimulate and inspire new efforts to integrate the values of sustainability into education and into all educational settings across the globe.

NON-FORMAL EDUCATION



Promoting an Environmental Culture for Children through Integral Art and the Earth Charter

Cardiela Amézcuca Luna¹



Introduction

Cardiela Amézcuca Luna is an art teacher, choreographer, and interpreter of what she calls “participative dance.” She is also a cultural promoter within the community, as well as an expert on regional development and environmental management. Since 1992, she has been undertaking an extensive task in rural Mexican communities – promoting and encouraging the arts, community culture, eco-tourism, gender equity, children’s rights, sustainable development, and caring for the environment.

Her endeavours consist of developing art projects and workshops that integrate the Earth Charter. By offering “integral art” workshops for children, Cardiela has worked towards her dream of setting up a solid ethical foundation for the harmonious growth and development of children within the different communities of Michoacán State, Mexico, where she lives.

¹Cardiela Amézcuca Luna is an art teacher and choreographer in Michoacán, Mexico.

The Communities for Hope project

"Communities for Hope" is a non-formal education project for children from three to twelve years of age – pre-school and primary school – especially within the state of Michoacán. This project stemmed from the dream of strengthening those communities that are committed to building a more sustainable future for themselves and their children, and celebrating their shared commitment to life and collective creativity. This project is implemented in conjunction with two civil society associations: ProDanza (an NGO working since 2001 to promote and disseminate arts and culture) and Echeri (working mainly on community projects for sustainable development since 2006).² Integral art is the means of expression within the "Communities for Hope" workshops; it includes dance, drama, music, storytelling, reading, writing, drawing and painting.

The purpose of "Communities for Hope" is to help alleviate the lack of materials and knowledge in the rural and indigenous communities in Michoacán State, in order to generate processes of children's environmental culture by using the most gracious, free and expressive means: integral art. This refers to dancing, painting, music and literature created by children to build bridges and communicate with the society to which they belong. Through this approach, children can develop the creative tools required to express what they feel, think, and do in order to protect, restore, and enjoy their natural resources.

This project has used the Earth Charter as its guide and inspiration. The focus is on training promoters of environmental culture for children through the arts. The first group of trainees comprised twenty promoters within ten of the Community Development Committees (CODECOS) of the municipality of Erongarícuaro in Michoacán (rural and indigenous communities living on the banks of Lake Pátzcuaro).

In order to encourage the establishment of the Community Spaces for Child Environmental Culture (ECCAI, its Spanish acronym), the project offered community workshops focused on creating an environmental culture for children using art and the Earth

Charter. The workshops concluded with the creation of a workbook for children where they shared – through drawings, paintings and literature – their views, reflections and experiences using the Earth Charter in their communities. This project was funded by the Programme in Support of Civil Society Organizations for Joint Social Responsibility of the State of Michoacán, through the Secretariat for Social Development.

From September to December 2006, a workshop was carried out to train interested stakeholders from the CODECOS in Erongarícuaro and other adjoining municipalities to become Promoters of Environmental Culture for Children. During the workshop, trainees were given the basic tools to encourage significant learning about environmental culture for children, as well as to strengthen regional campaigns for environmental education from the perspective of cultural art, community and family, and through the establishment of ECCAIs.

Following this, workshops in environmental culture for children were carried out in each of the ten CODECOS and their communities, under the name "Enchantment for making glow-worms grow." These featured activities such as a dance and participative storytelling session called "Rag Feet and the Earth Charter."

As a result of this experience, in February 2007, a basic manual and a graphic memoir of the workshops were released with the view to sharing (and replicating) the experiences of these teachers and cultural promoters for children.



Workshop at Colonia Revolución community.

²The members of this project's working group are Paulina Odilia Molina Capilla and Santiago Marcos Cruz in cultural promotion; Ramón Merino Ayala in graphics, editorial and audiovisual promotion; and Cardiel Amézcuca Luna in coordination.

The Earth Charter for children³ is the instrument used to implement the workshops about creating an environmental culture for children through “integral art,” because it encourages a reflection upon existing values and promotes a love for life.

According to Cardiel, “...the Earth Charter is our guide, art is the means of expression, children are the fertile soil, their own culture is their nourishment, and the environment for sustainable development is the collective construction of a better world from within the community spaces of environmental culture for children.”

Methodology⁴

Various artistic actions (for each Earth Charter principle) are carried out in the workshops of environmental culture for children, to strengthen their understanding of – and awareness about – environmental care and the relations between human beings. The average duration of the workshops is three hours (for children of three to six years of age), and four hours (for children aged six to twelve).

The following materials are needed to carry out the workshops: a large, empty, well-lit, ventilated room, or a plaza, or football field (or any ample community space that poses no hazards); a recorder with CD player; plain, white letter-size paper; and Crayons. The special materials required, such as fabric, music, etc., should be made available by the workshop coordinator.

All materials are used on a collective basis, and we (“Communities for Hope”), encourage their handling and use based on collaboration, not competition. For example, a circle or a spiral is formed (depending on space) with crayons, from which each child will take only one crayon, use it for his/her drawing, put it back in its place, and then take the next colour s/he needs, in such a way that the circle is always in place, and no one argues or snatches materials away from someone else.

The process starts with a conversation about our actions, in general; we then disclose the principles of the Earth Charter adapted for children; and subsequently there is

a discussion about what can be done in various artistic areas. A starting and closing ritual for the session is created collectively and adopted as a greeting and farewell practice. This practice may consist in making a circle and jumping, giving one another a “bear hug,” or walking and looking into one another’s eyes and giving them your best smile.

As adapted from the Earth Charter for Children:

Principle I. Respect and care for living things

1. Get to know, respect and protect human beings, animals and plants.

- a) Get to know and respect the way of life of human beings, animals and plants.
- b) Provide care and protection to plants and animals.
- c) Act against animal cruelty.
- d) Collaborate in the defence of plants and animals in danger of extinction.

2. Care for and love all living things.

We, human beings, created the environment in which we live and it is up to us to make it better.

- a) Respect the lives of all living things.
- b) Get to know and defend your rights and those of others.
- c) Protect the wellbeing of people and other living things.

The following are suggested activities to represent these principles and sub-principles:

Dance

- Represent, with movement and without sound, an animal found in the local community such as a bird or a fish. First, do this individually, and then in pairs.
- Try to imitate animals from faraway places (like Africa or the North Pole, if you’re in Mexico). Move around trying to mimic the way in which they eat, play, and fall asleep. Learn to feel the difference between the animals that you know and those you do not.

³This refers to a specific Earth Charter version that was adapted for children and developed by a group of teachers in Mexico.

⁴This methodology is described and elaborated further in the ‘Basic Manual of Environmental Culture for Children through Art and the Earth Charter,’ posted on the Internet.

- Repeat this exercise, only this time mimic herds, making larger groups, and performing the actions that animals might enjoy the most and the least
- Represent the dangers faced by animals in extinction in the region, and in other areas of the world. Every time that the games are changed, all the animals go to sleep and once again wake up in the form of children.

You will need: Ample space and comfortable clothes, and a recorder with music from nature or an instrumental piece, if available

Music

- Mimic the sounds of animals; create a melody, singing softly at first, and then louder, slowly, and then faster.
- Add to the melody the sounds of objects such as stones, falling leaves, seeds rubbed between hands or shaken in a can.
- Use the same melody, but gradually eliminate the sounds until there is only one left, and then slowly incorporate all the sounds once again until everyone is making a sound all together.
- Vary any one of these themes; change the intensity and the speed; alternate sounds of voices and percussion objects.

You will need: cans, tins and containers of different materials (seeds, small stones, marbles, pods with seeds inside), sticks of different sizes and textures and, if available, small percussion instruments.

Visual Arts

- Draw your favourite animals.
- Draw them in different colours, sizes and textures.
- Draw them doing unusual things, such as a rooster swimming or a fish flying.
- Draw them in dangerous situations, and in situations of freedom and care.
- Turn the drawing into a collage, pasting things such as feathers, soil, flowers, buttons, or whatever you like.

You will need: Paper, Crayons, colouring pencils or felt-tip pens, glue and several materials such as pasta, soups, seeds, flowers, dry or green leaves,

buttons, yarn, small pieces of fabric, feathers, stones, soil and small branches.

Literature

- In teams, write a story about animals in the community and the way in which they are taken care of; describe the dangers they face and how to resolve them; describe the characters involved in the story and give them names; describe in detail the place and time in which the story takes place (there has to be a beginning, a conflict, a development, an outcome and an end).
- Join all the stories of the group together and turn it into one big story.

You will need: Paper sheets or notebooks to write on; pencils or pens; and an invitation for an oral narration by grandmothers and grandfathers.⁵

Drama

- Create a play based on the story you wrote.
- Assign the roles to be played by each character.
- Select a narrator.
- Make the costumes with the materials at hand.
- Give each character time to rehearse his/her role.
- Come together to direct the play as a collective production.
- Perform the play before the audience.

You will need: Old clothes and fabric for costumes and reusable make-up.



Workshop at Tenencia Lázaro Cárdenas Community.

⁵ The invitation to grandmothers and grandfathers has to be made ahead of time so that they may be able to become acquainted with the nature of the session, as well as the place and time. They can be asked to bring objects, photographs, newspapers or magazines to help them tell the stories they will share. It is important that the children get to know the experience of grandmothers and grandfathers because they are a part of a 'living history,' and part of the intangible community heritage.

Comments for facilitators

The theme is reinforced in each of the actions, and you can gradually incorporate the critical and creative reflections about what is done to build, and what is done to destroy; look at both possibilities and visualize where each action will take us. For example, when we give care, there's reproduction; and when we destroy, there's extinction.

You may use the same artistic actions, and vary the subject. For example, instead of using animals you could portray, draw and describe the people and plants in the community. What are interesting are the variables you can incorporate in different locations within the community. Keep in mind that the variations, mixtures and metaphors constitute the salt of life. You can blend dance and drama, sound and drawing, dancing and singing while you write a story – the door is wide open.

Lessons Learned

When working with children under six years of age, non-verbal communication works well. So does giving short and concise instructions, reading the Earth Charter out loud, using books with large pictures and little writing, free and expressive movement, and reflection based on personal stories regarding the environment and community living.

When working with children six years and older, who know how to read and write, verbal and corporal communication prove to be more effective. This age group likes more detailed instructions with examples, sensorial and entertaining stimuli, quiet reading, and individual reflection on the Earth Charter adaptation for children. It might be useful to start the conversation by asking the students on how the Earth Charter principles are reflected in their own family and community settings. They like books with more information and innovative pictures, their movement is more rhythmic and collective, and they like to practice choreographies with defined steps agreed between them.

In the case of adults, it is exciting to watch the moment they regress to their childhood and remember the free expression of their prejudice and fears. During the training of the promoters an emphasis is made on "going back to their own childhoods" to acquire the necessary elements to stimulate children during the workshops, it also helps to build links that transcend teacher-student relations and encourages meaningful learning that is circular, loving and ethical.

The project has generated an impressive response at the community, family and individual levels. This could be in large part due to the fact that art is a means of expression that dignifies action, and community members readily embraced the Earth Charter as an expression about what they would like to improve in their relationships, community, and environment. In



Activities at the community of La Zarzamora



Activities at the community of Nocutzepo.

addition, the document was found to clearly express the principles and values of the community's ancestral indigenous culture, which remains an important part of identity in the region.

Fundamental to the success of the project has been a 'bottom-up' approach: the needs of the community were clearly defined in order to minimize the imposition of external beliefs or values. It is necessary to be coherent with the premise of acting locally, but thinking globally. Instead of imposing, one learns to share; instead of convincing, one begins to fall in love – with every space, every moment, with every participant, with every expression.

During the training sessions for community promoters, we have been engaged in constant reflection. It is necessary to remind ourselves to intertwine local knowledge with a sense of strengthened global identity. This will allow us to value ancestral wisdom while drawing upon global knowledge and strengthening the community structure.

Thus, within the context of the "Communities for Hope" project, it has been important to define what we understand as identity. As noted by Mac Gregor:

...an individual's identity is nurtured by its immediate surroundings, it will prosper and be renewed with the modest but permanent contributions of the individuals of which it is made up. Identity is the past, the history and the collective memory, and it is also the present. So to make the best of it, it is important to respect it and appreciate it. It is necessary to defend what's yours, but it is also worthwhile taking others' experiences that may help shape, add to, or enrich your identity.⁶

And, as noted by Bonfil Batalla:

With this outlook on identity, the Earth Charter has become the leitmotiv of the artistic actions weaving the local wisdom of the Purépecha indigenous culture into the knowledge of the emerging global community, to stimulate every niche of one's own culture, to which children have always applied their resourcefulness, originality and creativity.⁷

In the process of working for and with children, we have come to learn that they are the architects of culture, and not only the recipients of culture and knowledge. With this in mind, it is crucial to develop meaningful relations with children through a dialectic and collaborative process, in which we can all participate, grow and learn.

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⁶Mac Gregor Campuzano, José Antonio. *Reflections regarding 'identity.'* PACAEP/SEP. 1995.

⁷Bonfil Batalla, Guillermo. *Ones' Own and the Others' An Approach to the Problem of Cultural Control.* In *Theory and Analysis of Culture*. Ed. Jiménez Montiel, Gilberto. CONACULTA-ICOCULT. Mexico. 2005.

Training the Trainers: in Values Education

María Pinar Merino⁸

Introduction



The Valores Foundation (Fundación Valores) has designed and developed courses and workshops for training educators in Values Education using the Earth Charter within the framework of the United Nations Decade of Education for Sustainable Development. Our primary objective in creating these courses is to prevent the Earth Charter from going down in history as just another document filled with good intent. Rather, we want to turn the Charter into an instrument for the growth of human beings, and one that will encourage personal transformation – thus becoming the embryonic tissue that will be the basis for a more just, sustainable and peaceful society. Our activities are focused in two complementary areas: workshops for teachers at training centres, and workshops for teachers in elementary and secondary schools.

⁸ Fundación Valores, Madrid, Spain.

Workshops for teachers at training centres

Throughout the 2006–2007 school year (to be continued during the 2007–2008 school year) the Valores Foundation offered intensive 40-hour workshops that took place over several weekends. These workshops were aimed at pre-school, primary school and high school teachers, as well as the directors of teacher training centres, representatives of Students' Mothers and Fathers Associations (AMPAs) and social agents in each autonomous community. These workshops were organised in close collaboration with the Teachers' Training Centres and were presented by María Pinar Merino, the person responsible for education outreach at the Valores Foundation.

The objective of this effort has been to further values education from early childhood onwards, and to make people aware of the Earth Charter as a useful instrument in developing education on universal values (a priority objective of Spain's Ministry of Health). Approximately 120 people took part in the workshops; the first one was held in Elche (in Alicante, Spain), and subsequent others in Seville, Granada, Madrid and Barcelona. It was estimated that approximately 2,000 students benefited indirectly as pupils of the participating teachers.

Activities and impact

Once the training was completed, a 'working group' was created in each city, and these groups took it upon themselves to generate and disseminate information on actions within the student communities, as well as to serve as the central distribution point for materials, and consultation services. This model of having workshops and follow-up work groups yielded very broad results, encompassing all the students from the different schools through the initiatives generated by the participating teachers, and reaching large geographic areas within the different provinces.

At each school, every teacher put forth the recommendation to the academic staff committee and the school council that the Earth Charter should not be

considered simply as another subject or activity, but rather as a cross-cutting topic permeating all disciplines. Using the materials produced in the 'training the trainers' workshop, several activities intended for students were carried with the teachers, covering many areas, **such as:**

- Creative (Drawing, painting, craft making, poetry competitions, literature, composition, theatre)
- Technical (Construction of solar stoves)
- Scientific (Experiments with recycled seeds and seedlings)
- Sports (Participation in games, creativity, mutual trust, cooperation, and problem-solving)
- Social (Participation in recycling campaigns, responsible consumption, peace culture, and multiculturalism)

Workshops for teachers in primary and secondary schools (high schools)

Training of pre-school and primary school teachers took place from December 2006–April 2007 (to be continued during the 2007–2008 school term) in two schools selected from within one municipality of the Madrid Community. These schools were singled out as priority because they serve underprivileged populations, such as migrant populations, ethnic minorities, and gypsy populations.

The objective of these 26-hour workshops, held for 2 hours each week, was to promote education on universal values, to familiarize the academic staff of each



Workshop at CEFIRE de Elche- a center for professor training.

of the schools with the Earth Charter, and to help them generate ideas and projects to explore its 16 principles. The workshops were followed by additional hours of consultancy and assistance in preparing initiatives and projects for the 2007–2008 school year. Lectures were also shared with families in the area in support of the sustainability education carried out with students. Thus the families and staff also became involved in the activities being developed by the children.

We, the parents, have to become more involved with the school, but teachers also have to understand that the transfer of values is not restricted to the religious, political or family realm, but that the school plays an essential role for the future; they can teach the children from a more universal perspective.

– *Father representing the Association of Mothers and Fathers of Students in Madrid.*

The teacher trainings ended with two-hour workshops for the 440 students in both schools, which set an example of the training in action, and further motivated the participant teachers. The children's workshops were replicated so as to reach 500 more children from other schools in the same municipality. These workshops were organised in close collaboration with the Town Hall of Torrejón de Ardoz. María Pinar Merino presented the training workshops, and teachers from the municipality presented the children's workshops.

Activities and impact

This experience generated rich and rewarding collaborations. It enabled the Valores Foundation to work in close contact with the entire teachers' community, as well as gain the participation of the Town Hall, through the Consumers' Council, which supported the following activities to help disseminate the Earth Charter values:

- An itinerant exhibition of the Earth Charter in schools, visited by all students and AMPA.
- Citizens' awareness conferences comprising

several events, organized around important UN dates, such as: the anniversary of the Universal Declaration of Human Rights signing, World Peace Day, and Working Women's Day.

- Intercultural conferences on gastronomy, folklore, customs, culture, and music.
- The formation of a working group with individuals from the two participating schools, to share projects and collaborate on actions within the municipality. The Town Hall offered its facilities and logistical support to enable this working group to hold regular meetings, so that they may continue to generate initiatives throughout the 2007–2008 school term, and more easily facilitate the involvement of people in the surrounding areas.

Methodological aspects

As outlined in Appendix I, one important methodological moment from the workshop is the distribution of a questionnaire for teachers aimed at generating reflection, analysis, and debate on human relations, social reality, intercultural challenges, ecology and peace, among others. The questionnaire seeks to raise awareness among participants about their own values. The following are examples of questions used for reflection and self-knowledge: What are the things I believe to be important? What should I know about



Activities carried out by a policeman of Novelda- Alicante.

values? What are my values? What values do I expect to find among others? How do they affect my behaviour? Which values encourage sustainable development? What rules are essential for peaceful and humanitarian cohabitation? How should I relay these values so they are better understood by children?

Subsequently, theoretical and practical sessions take place: Exposure; Dynamics; and Exercises. The IDC (Information-Discussion-Creation) model is used in a dynamic, cooperative, recreational and participative manner, with everyone sharing their personal experiences and delving into real-life cases. The workshop is eminently practical and has a learn-as-you-go design, using an open approach. Theoretical knowledge is consolidated through the active participation of the attendees in the dynamics developed throughout the sessions. The learning process followed is knowledge-action-reflection-action.

I hadn't realised there was such a fracture between the social reality and the school microcosm. The Earth Charter has allowed me to look at my work with children from a new perspective.

– *High school teacher in Seville*

The facilitator makes use of multiple strategies and innovative educational methodologies, such as: world dances, preparatory games, games involving action, creativity, mutual trust, cooperation, investigation, sharing ideas and feelings and affection. Also, the facilitator might use exercises for breathing, meditation, creative visualisation, tuning, inner silence, neuro-linguistic programme. Communication and problem-solving is facilitated through debates, meetings, and critical-thinking; while artistic expression is shared through music, acting, storytelling, drama, and role-playing.

Initial goals and accomplishments:

- To inform participants about the foundation values of the Earth Charter, in a pleasant and participative manner. To this end, we gave presentations at the Town Hall for school principals and School Councils of selected

schools. We also selected workshop participants and scheduled workshops for the school year.

- To incorporate into the 'Centre's Annual Project,' the Education on Values and the Earth Charter as a cross-cutting axis, recognizing the latter as the ideal educational instrument to promote individual and collective responsibility, a sense of belonging to the community of life, responsible environmental, technological and social advancement and relationships of tolerance, respect and care among human beings.
- To use the Earth Charter as an instrument to provide Education for Sustainable Development, whose goal is a world in which everyone has the opportunity to benefit from a good education, to learn about the values, attitudes and lifestyles necessary for a sustainable future, and to make positive changes within society.
- To encourage the creation of networks through which to share materials and information between the different centres in the municipality and autonomous communities.
- To achieve greater citizens' participation by involving different administrative departments of Town Councils in the projects generated by the schools.

In summary, the steps of this training process are: raise awareness; get to know; single out values; identify attitudes; and participate.

Lessons Learned

The workshops prompted three main observations from the reflections of participants. The first observation was the discovery of a profound crisis affecting the teachers' guild. This was related to many factors, including the lack of social recognition of teachers' work, the lack of in-service training, the lack of support from the administration and students' families, teaching fragmentation, pressures by the Ministry of Education to comply with curriculum, constant change in the Education Legislation, and the decentralization of educational competences to the autonomous communities.

The second observation was the acknowledgement by the teachers of the critical situation that society is facing, and its bearing on the school environment. For instance, over half a million foreign students enrolled in the 2005–2006 school term, precipitating multicultural clashes, crises concerning values, overcrowded classrooms, and curriculum fragmentation.

The third observation was that teachers acknowledged they did not have the necessary tools and specific training to respond to the requirements of their daily work in the classroom, nor to the challenges posed by situations that were new to them.

Despite these troubling reflections, we noticed a remarkable attitude and openness among participants towards using new teaching techniques, which they experienced when playing the role of students during the workshops. The goal was to assist teachers in using all the materials, exercises, games and practices in their classrooms, once they were adjusted to the different age groups of their students.

Upon evaluating the final results, we noticed important differences between: Training in Teachers' Centres, and Training in Schools. In the first case we achieved a greater dissemination of ideas and reach because teachers from many schools participated. The disadvantage was that we did not attain 100% involvement of teachers from the same school. Hence, the participant did not always have the ability or conviction to return from the workshop and involve the teachers' guild in his/her school. In the second case the outcome was more concentrated, in that we worked with one school per workshop and managed to delve deeper into the experience by involving the whole school community, and sometimes even the social environment surrounding the school.

Another important lesson learned from both cases was to find the common denominator among all the participants, which can be expressed as: "their concern about the current situation and their desire to stop being spectators and do something to shape a better world." From this standpoint, the participant is simply one person, speaking from his/her own point of view, without regard to title or line of work. The Earth Charter's content can then be expressed with all the force of its nature. As such, the message is addressed to the individual, and they can experience the Charter as a dynamic and powerful tool for personal transformation.

To further this lesson, workshop facilitators should adjust the language they use to the specific group being addressed. They should also use such accompaniments as music, audiovisual materials, and documentaries, when sharing the text of the Earth Charter in order to make it more appealing. Because the concepts are theoretical and sometimes expressed in intricate terms, using music and images can help engage people's emotions, make it easier for people to become personally involved, and moved to action.

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APPENDIX I. Outline of a session:

- Welcome speech. Presentation of the participants.
- **Basic group agreements:** consequences, open-mindedness to change old mental patterns and develop trust.
- Greeting dance. (e.g. Kos Greeting Dance, Ena Mitos)
- Collecting expectations from participants (hopes and fears) about the workshop.
- **Key words:** brainstorming a list of words representing participants main concerns, initially within their particular contexts and subsequently on a more global level.
- Presentation of the Earth Charter.
- Becoming familiar with the Earth Charter. Each participant is provided with four cards of different colours, each one with a different principle of the Earth Charter (I. Respect and care for the community of life, II. Ecological integrity, III. Social and economic justice, IV. Democracy, non-violence and peace). They are asked to collect articles from the media, related to each principle (whether in support or violation of the principles). In the following session, participants share in groups the material gathered.
- Reflection exercise on one's own set of values.
 1. Participants make a list: MY SET OF VALUES, listing their most important values.
 2. Participants engage in a brief visualizing-reflection exercise consisting of travelling back in time (to the ages of 7 or 8 years old) in order to make a connection with the values with which we were brought up since childhood. Then we draw up 2 lists, one with dad's values and one with mom's. An optional fourth list may also be drawn up to include the values from a teacher that made a significant impression on us when we were in school. (This exercise has two objectives: it helps identify the hidden curriculum, and makes us reflect upon the importance of the learning process during our childhood. Psychology shows that the personality is shaped during the first 12 years of one's life).
- Handing out a questionnaire for evaluating the different areas in your line of work to determine the most important problems each person has to confront when carrying out his/her teaching or educational work. This questionnaire yields the main topics of discussion in the workshop during the weeks ahead. (A consensus-based list of objectives will also be drawn up, prioritized, and each objective will be matched with one of the 16 principles of the Earth Charter; then a solution to each objective will be sought in a recreational manner, such as by playing a game called 'Let your ideas fly.' Paper planes are built; on one wing you write the value, principle or action you would like to promote; the planes are flown while the music plays and when the music stops, each person picks up the plane nearest him/her and writes a proposal or suggestion to achieve that objective... the music starts once again and is repeated several times until all the planes have been written all over. The planes are gathered and a list of the ideas is drawn up. They are innovative, bold, creative... A plan can be designed (with a schedule) for these activities to be carried out in the centre.
- **Exercise:** Learn to see the other person. Shift your view of yourself, first, and to the other person, second, and finally to the world around you.
- Farewell dance. Canon by Pachelbel.

Experiential Workshop for Educators on the Earth Charter

Deucélia Nunes, Flávio Boleiz Júnior, Guilherme Blauth, Levana Saxon, and Paulina Christov⁹



Introduction

Based on the premise that the best way to teach values and principles for sustainability¹⁰ is by putting theory into practice, we have developed experiential workshops with the Earth Charter that are adapted for children, young people and adults.

The workshop was designed to work well for a large number of participants, with the ability to accommodate groups of 24 to 600 hundred people (these are the fewest and greatest numbers of people with whom we have worked).

⁹ Deucélia Nunes (known as "Celinha") is an Eco-pedagogue, Teacher of Mathematics and Pedagogical Assessor of the Paulo Freire Institute, where she participates in the coordination of several educational projects.

Flávio Boleiz Júnior is an Eco-pedagogue, and Pedagogical and Educational Advisor at the Peace Queen College in São Paulo. As Pedagogical Coordinator for Green Life Associations, he is also a collaborator of the Paulo Freire Institute and the Centre of Friends of Infancy and Adolescence (NAIA). He is one of the representatives of the Earth Charter in Brazil.

Guilherme Blauth is an Eco-pedagogue, educator and director of the Harmony on Earth Institute.

Levana Saxon is an Eco-pedagogue and Educational Coordinator of Rainforest in Berkeley, California, USA.

Paulina Christov is an Eco-pedagogue, researcher at the Paulo Freire Institute, collaborator of the Carlos Chagas Foundation and an advisor for Massini Educational Consultancy.

¹⁰ We would like to emphasize that we do not believe in "sustainable development" in the capitalist production sense of the term. Instead, we believe in the possibility of building sustainable communities from production systems that do not exploit the Earth's materials beyond its capacity for regeneration, which we consider impossible in a consumerist society.

The first time we carried out this pedagogical exercise was during the Brazilian Social Forum in 2003, which took place in Belo Horizonte. During this event, nearly 120 people took part in the workshop.

We have repeated the same workshop, with minor changes, several times; the modifications have resulted from evaluations and comments made by the participants. For instance, we successfully incorporated the content into a 600-person training module for Pre-school and Primary Education¹¹ teachers, in Uberlândia (Minas Gerais). In this same city, we offered another workshop for 250 people during a training initiative for educators.

In terms of our work with children, this workshop was delivered to approximately 400 children in the Pio XI College (Colégio Pio XI), in São Paulo; and 600 children in the Albert Sabin College (Colégio Albert Sabin), in the same city. During these activities, we tried to limit the number of participants to 40 students per workshop.

With the support of the Department of Education's Academic Centre, the workshop was also carried out at the University of São Paulo, as part of an Introduction to Eco-pedagogy course involving a group of 50 educators. In the 'Albert Einstein of São Paulo' and 'South Morumbi' Departments, the workshop was delivered in the field of 'Education and Sustainability' to four different cohorts of Pedagogy students, enrolling a total of 153 university students.

The following educators participated in the first workshop design and execution:

- Deucélia Nunes (São Paulo, Brazil/ Paulo Freire Institute)
- Flávio Boleiz Júnior (São Paulo, Brazil/ GRUTEUSP/Green Life/ Harmony in Earth Institute)
- Guillermo Blauth (Santa Catarina, Brazil/ Harmony in Earth Institute)
- Levana Saxon (California, United States/Paulo Freire Institute /Rainforest)
- Paulina Christov (São Paulo, Brazil/ Paulo Freire Institute/Carlos Chagas Foundation/Masini Educational Consultancy)

These five Eco-pedagogues had already been working together on issues related to eco-pedagogy, education for sustainability and the Earth Charter at a range of events, such as the World Social Forum of Porto Alegre and the World Education Forum. Several members of the national network of Eco-pedagogy and Earth Charter also planned to hold a meeting in the Brazilian Social Forum, a self-managed activity, where they could put into practice their experiences and theories.

In a project sponsored by the Institute C and A, and developed by the Paulo Freire Institute, Deucélia launched the Democratic and Participative School Council to offer sustainability-related training to parents, educators and students. She offered lectures, conferences, group dynamics and workshops with a democratic perspective, supported by the Earth Charter Centre on Education for Sustainable Development.

Flávio participated in the Eco-pedagogy and Planetary Citizenship Movement through his involvement with the Paulo Freire Institute. He developed and applied educational projects in collaboration with teachers, students and other stakeholders, using the Earth Charter as an ethical framework for education for sustainability. In addition, Flávio offered lectures in pedagogy departments, where he taught Education and Environment, keeping a similar focus.

Some years ago, Guillermo developed a project with the Harmony in Earth Institute in Santa Catarina State, to sensitize teachers and students about the values and principles of the Earth Charter. The aim was to promote the development of eco-pedagogical work in public and private schools.

In Brazil, about one year ago, Levana studied the inter-relationships between environmental education, social linkages based on a philosophy of liberation, and Paulo Freire's ideas. Her studies started with the observation and practice of community-based participatory management of urban and agricultural problems.

As a collaborator of the Carlos Chagas Foundation and Paulo Freire Institute, Paulina was part of the

¹¹ In Brazil, Pre-school Education is for children 4 and 5 years old, while Primary Education (Ensino Fundamental) is for children from 6 to 10 years old, corresponding to the former 'primary school.'

coordination team for the Jovem paz (Youth and Peace) Project. The project used the Earth Charter as an ethical framework and pedagogical tool for youth training on peace and sustainability culture.

The meeting in Belo Horizonte, during the Brazilian Social Forum (2003), made it possible for these eco-pedagogues to collaboratively develop and design the workshop.

We will now describe the methodology of the workshops.¹² It is important to emphasize that the main objective of this work was to sensitize the Brazilian Social Forum participants about the importance of leading sustainable lives, with the Earth Charter's values and principles as a starting point for personal change. This remained the primary focus of the workshops that would follow suit, as we recognized that this message needed to be spread across all of Brazil's educational sectors.

Methodological aspects

1. Welcoming the Participants

Some posters with keywords related to the Earth Charter are posted on the walls of the conference room. As they arrive, the participants are invited to choose one, two, or as many words as they would like, from the posters. Then, they must write down or draw what the chosen term means to them.

While people are arriving, it is advisable to sing some songs, and play the guitar, for example, to create a cheerful ambiance.

Some keywords for the posters are: Justice, Peace, Democracy, Education, Environment, Earth, Ecology, Citizenship, Conscience, Equity, Respect, and Ethics.

2. Brief discussion about the posters

After the participants have completed this initial task, a brief discussion is held about which words were

selected from the posters. Those who wish to do so can share their thoughts and pictures of the word(s) with the rest of the group.

3. Eco-pedagogical mandala¹³

After this brief discussion, participants are invited to move to a spacious area – if possible, outdoors – where they will form a big circle. Everyone sits down and the new activity starts.

There is a brief explanation (because this is more of a practical than a theoretical workshop), about what the Earth Charter is, and why we should incorporate the Earth Charter values into our daily lives, both in terms of formal and informal educational settings.

In this short discussion, we talk about the importance of working together to build values-based knowledge in order to make positive changes to the society in which we presently live. We talk about the importance of ecological integrity for the sustainability of life, social and economic justice, and non-violence and peace in building a more sustainable society.

In the centre of the big circle, we place the following element-objects: a lit candle – symbolizing the 'fire' element; a cup or jug with water; a bowl with soil or a great rock; and a flower or little plant.

Now, we ask each person to go to the centre, close to the elements placed there, and to donate something of



Activities during the workshop.

¹² For questions or to make comments relating to pedagogical applicability, please feel free to contact Flávio Boleiz Júnior: flavio.boleiz@gmail.com

¹³ Circle

his/her own. The object is meant to symbolize an action that a person can make to contribute to the global mobilization of efforts towards a more just and sustainable world. For example, someone might place a watch next to the elements in the circle to symbolize the time that s/he is donating. Another person might donate a pen, signifying his/her writing and studies. Others might donate a magazine, a ring, or even a song to perform in front of the group. The main point is to objectively and briefly explain the meaning of the donation, if possible, using only one phrase.

After all the participants have introduced themselves and made their donations, we ask them to leave their objects in the centre of the circle until the end of the workshop.

At this point, we speak to the group about the different ways that we can acquire knowledge. We explain that the next activity is designed to demonstrate how knowledge acquisition can take place in very fun and enjoyable ways, such as learning from other people's viewpoints about principles and values, such as those promoted by the Earth Charter.

Then, we move onto the next activity.

4. Face to face

We divide the group into as many sub-groups as needed, making sure that each sub-group has a maximum of 30 participants.



Reading the Earth Charter principles.

Each sub-group must form a pair of concentric circles, so that the inner circle has the same number of members as the outer circle. Each participant of the inner circle must place him/herself in front of a participant of the outer circle, and vice versa.

We start the activity by writing down on poster paper the most commonly selected words from the beginning of the workshop.

We explain to the participants that the objective of this activity is to speak and to listen. The first thing is to choose a word from the posters. Then, each participant of the outer circle holds the hands of the participant in the inner circle and has 20 seconds to say everything that comes to mind regarding this word. The participant of the inner circle only listens, and says nothing. At the end of the 20 seconds, both partners hug and thank each other. Then the outer circle takes a step to the right, changing over to a new inner circle partner. Then, the activity is repeated and the participants select ANOTHER one of the words. But, now, it is the participant of the inner group who speaks, and the members of the outer group only listen. This exercise is repeated until a full rotation of the circles has been made.

Finally, we come back to the big circle and discuss what we learned and experienced from this activity. After a long discussion, we invite the attendees to participate in another one.

5. Artistic performance with multiple languages

The group is divided into 4 sub-groups and then we explain the next activity:

Each sub-group will work with one part of the Earth Charter. (If the number of workshop participants is too large, the group may be divided into 6 sub-groups, with one sub-group working with the Earth Charter Preamble, and the other sub-group working with "The Way Forward.").

The sub-groups will have to collectively read the principles in their respective part of the Earth Charter and, within a 30-minute timeframe, prepare a presentation featuring at least two artistic modes of expression to articulate the content of their reading.

After 30 minutes of preparation, each sub-group delivers its artistic presentation in front of the others. At the end of the presentations, the group returns to the big circle to discuss the issues addressed.

After a long discussion, we suggest that each person make a commitment to contribute to building a better and more sustainable world from that moment on. Then, each participant expresses his/her commitment.

6. Circle of Closure

As a closing activity, we stand up and form two concentric circles. The inner circle is smaller than the outer circle. We perform a *ciranda*¹⁴, engage in a big hug with the entire group, and close the session. Then, all of the participants remove the objects they offered to the mandala (circle), and begin to fulfill their commitments to building a better world!

7. Some results

We have been able to establish contact with some of the former workshop participants over the few last years and it is interesting to hear about their contributions to increasing other people's awareness and engaging them in sustainability activities.

Some university students have told us about the work that they have begun to carry out with children (in kindergarten and primary schools) as a result of our presentations and reflections about methodological options with the Earth Charter.

Other students have chosen to focus their thesis on topics related to the Earth Charter, education for sustainability, ethics and eco-pedagogy.

Some institutions (NGOs and local governments) have come to us to request courses and training sessions,

motivated by the positive experiences that their colleagues had in the workshops.

Frequently, we hear stories and receive e-mails from people and organizations that are trying to develop educational work with those methodologies that we are attempting to disseminate, in order to become more in tune with the values of the Earth Charter and education for sustainability.

Lessons Learned

We would like to emphasize a few key lessons that we have learned from this work with the Earth Charter and education for sustainability.

First, we believe that education is only possible through engaging and learning collectively within the context of the reality that surrounds us. It is not possible to develop sustainable methodologies supporting collective relationships – between educators and students – on the basis of individual initiatives. Paulo Freire warns us of this issue, saying that "...nobody educates anybody else, as nobody educates himself: men educate each other in community, mediated by the world" (Freire, 2002, p. 69).

Secondly, we consider it impossible to work collectively if all the involved parties do not have as guiding principles the same ones that define democracy. **And we agree with Vitor Paro, when he states that:**

Democracy... should not be seen only in its etymological connotation of 'people's government' or in its formal version of the 'will of majority,' but, instead, in its wider and more current meaning of mediation for building freedom and social coexistence, including all the means and efforts based on historically constructed values, to reach agreement between groups and people (Paro, 2001, p. 10).

Based on the testimony of their staff members who have participated in our workshops, a range of

¹⁴ A traditional Brazilian dance

institutions (NGOs and local governments) have asked us to offer additional courses and training sessions to their employees. In some cases, these consultations have turned into projects to develop continued training courses for teachers, and pedagogical coordination for formal and non-formal educational institutions.

Finally, we would like to emphasize the importance of the notion of a 'unity of diversity' in our efforts to become planetary citizens. If we believe in the Earth Charter values and principles, then we need to actively contribute to the construction of another world, another educational structure and a fairer, democratic, inclusive and sustainable planetary system.

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Changing the world one fun badge at a time

Genie Skypek¹⁵ and Alicia Jiménez¹⁶

Introduction

The Earth Scouts is an Earth Charter U.S. educational programme that inspires youth to take action alone, and with others, to build societies that respect human rights, live in peace, practice participatory democracy, and use the planet's resources with wisdom and concern for all life. The Earth Scouts is 'scouting plus' – a programme focused not only on learning and demonstrating skills and knowledge, but one that encourages using those skills and that knowledge towards "acting to improve the world!"

Jan Roberts, the President of Earth Charter U.S. in Tampa, Florida, launched the Earth Scouts programme in 2002 after the first Earth Charter Community Summit in 2001. She thought it might help get youth more involved with the Earth Charter, so together with a small team of volunteers, they created the initial structure of the Earth Scouts.



¹⁵ Earth Charter US, Tampa, Florida, USA

¹⁶ Earth Charter Centre for Education for Sustainable Development at UPEACE, Costa Rica

The main goal of the Earth Scouts is to provide young people with opportunities to learn and develop skills for seeing, analyzing and being inspired to help change the policies and practices that create unsustainable and life-devaluing communities – turning them instead into sustainable and life-valuing communities. These efforts also seek to stimulate a spirit of cooperation between youth, and between youth and adults, as they co-create communities that function in harmony with the values of the Earth Charter.

A notable anecdote from the first planning meeting for the Earth Scouts involved a group of adults sitting around a table, focused intently on writing a comprehensive mission statement. At one point, a ten year-old boy asked, “Are we doing this in adult talk or kid talk?” This poignant question helped define the focus of the Earth Scouts as a youth-centred programme, as well as shape the programme slogan: “Changing the World One Fun Badge at a Time – youth working together to make the Earth Charter a reality at home and in the community.”

In addition to deciding to put the focus on building a youth-centred programme, the following are other key policies and guidelines decided during the programme’s initial planning phase:

- Earth Scouts is inclusive – girls and boys are welcome and can be in the Earth Scouts together.
- Parents are facilitators and mentors, not autocratic leaders.
- Badge guidelines are open, offering room for local adaptation.
- Emphasis is on cooperation, not competition.
- Earth Scout groups are independent financially and administratively, but membership dues (fees) will not be charged. However groups can raise funds to support their activities.

Earth Scout groups are encouraged to follow these policies and guidelines, and to make their decisions and actions congruent with the mission, vision, and principles of the Earth Charter.

Katie Templin Culbert, a student at the University of South Florida, helped spearhead the early development of the Earth Scouts programme. She organized the implementation of the Earth Scouts Festival – a day of activities for children and youth highlighting Earth Charter principles – and several festivals were held during Earth Charter Community Summits throughout the US.

Katie, together with Sue Carter, a former curriculum developer, put together the first Earth Scouts Facilitator’s Guide, after realizing that parents and potential group leaders needed assistance starting and facilitating Earth Scouts Groups. It offers guidelines for earning badges and offers suggestions and examples for leading activities. Later, Kelli Lopardo, a former middle school science teacher and home-schooling parent, who had organized an Earth Scouts Festival in 2004, took on the challenge to further develop the Earth Scouts Facilitator’s Guide. To support this effort, Jan Roberts requested and received funding in 2005 from the Children’s Board of Hillsborough County in Tampa, Florida.

Earth Charter U.S. volunteer, Genie Skypek, is currently providing the support for the coordination and infrastructure of the Earth Scouts, in concert with Jan Roberts. The majority of the facilitator-leaders are parents, many of them engaged in home-schooling their children (parents following a flexible state-approved curriculum) or un-schooling (non-standards-based, child-led, interest-based learning). It’s of interest to note that the home-schooling movement is the fastest growing educational alternative in the United States.¹⁷ If the Earth Scouts were to become imbedded in the home-schooling system it would be a powerful mechanism for increasing young people’s awareness of the Earth Charter principles. Other facilitator-leaders include teachers who start Earth Scouts activities in their schools, and religious educators, with organizations such as the Universal Unitarian Church and Congregation of the Humility of Mary.

Efforts are underway to collect information about how many Earth Scouts groups are currently operating in the US, yet it’s known that at least 52 groups have been formed; they have received support from Earth Charter U.S. and its volunteers over the last few years. The Earth

¹⁷ Cardiff, C. (1998). The Seduction of Homeschooling Families. Retrieved May 29, 2007 from http://www.homeschooloasis.com/art_the_seduction_of_hsing_fams_cardiff.htm

Scouts online listserv has 196 members, and has received inquiries about starting Earth Scouts groups from people in Canada, Mexico, Australia, Thailand and Rwanda.

Earth Charter U.S. plans to provide ongoing support to existing and new Earth Scout groups in the US, and hopes to spread the Earth Scouts programme throughout the global community. Genie Skypek is working to improve the Earth Scouts website and to provide additional information, materials and resources for Earth Scouts groups.

Methodological aspects

The Earth Scouts process for earning a badge

In general, Earth Scout groups have between five and fifteen members, comprised of youth from across a community or the members of one family (See Box 1 – experience about starting an Earth Scouts Family). With the assistance of a facilitator, groups engage in activities aimed at teaching youth about five basic principles from the Earth Charter: respect for the Earth, respect for human rights, participatory democracy, economic justice, and peace and nonviolence. There are five badges that can be earned, one for each principle, and are awarded in recognition that the Earth Scout has learned about, and acted upon, each principle. As Earth Scouts members who continue participating after earning all five badges – taking actions in support of the Earth Charter principles to improve their homes and their communities – can earn stripes of varying colours to indicate their achievements.

Participants must take the following steps to earn a badge:

- (1) Understand and become inspired about an Earth Charter principle.
- (2) Create something relating to that principle (for example, an art or music piece).
- (3) Act in the spirit of that principle to make a positive contribution in their local, national or global community (for example, writing a letter to the media, showing appreciation to others, working to make or change a law, building a park, etc.).

The role of group facilitator is to provide information and experiences that help educate and inspire youth about the Earth Charter principles. Once scouts are informed and inspired, it is expected that facilitators will 'back away' and provide only the necessary support to youth who will, in turn, design their own creative actions to further the application of those principles in their lives and communities. Youth can translate their understanding of Earth Charter principles into action – they can see how the principles are and aren't supported by various policies and practices – and then decide how best to advocate for those principles and make a difference. By doing so, they are achieving the mission of the Earth Scouts: "Changing the World One Fun Badge at a Time – youth working together to make the Earth Charter a reality at home and in the community."

Box 1 - Starting an Earth Scouts Family – Pam Woods, Portland, Oregon, USA:

I got an idea during one of the informational meetings about the Earth Scouts from another parent who was also interested in the programme. She voiced a difficulty that many other parents voice, which is "How do I find the time for yet another thing for our family to do?"

So I started thinking about simply having days at home where my three kids and I would just have fun "being Earth Scouts." So when we took care of our lawn without using pesticides, we were being Earth Scouts because we were protecting the Earth in our yard, and once we even packed "zero-waste lunches" for school.

More recently, during conflict between the children, I simply halted everyone – even though part of the conflict was the need to hurry out to go to school – and we discussed our family, what it meant to us, and what was truly important to us. So we donned our "Earth Scout" hats and acknowledged that peace starts with us, and so we needed to communicate peacefully at home with those we love. The best way to be able to send that ripple out to all that we encounter and impact others is by living that way ourselves. This led to a truly wonderful discussion and a very smooth, loving, supportive morning!

Description of Earth Scouts guide and group activities

The Earth Scouts Facilitator's Guide provides information on fostering an Earth Scouts culture based on cooperative learning. It gives suggestions for badge activities that empower scouts to engage with each other and their families in activities linked to the principles and values in the Earth Charter. The Guide suggests activities related to each of the sixteen principles of the Earth Charter Principles, to create awareness, skills, and knowledge. **For example:**

- To inspire – use exercises, games and songs (e.g. “Where We All Belong” by Raffi and “Heartbeat of the Earth” by Shana Banana – both songs were written in support of the Earth Charter); read, tell stories, and create skits and performances that involve and excite youth about the principles; walk in natural settings and hike in local, state or national parks.
- To increase knowledge – facilitate discussions about the principles and engage in research and study; attend the town council and meetings of relevant organizations and groups that are working on issues related to the principles.
- To be creative through art and science – express a personal vision and understanding of the principles by taking photos, making movies, drawing pictures or painting, weaving, writing, analyzing water quality at school, or testing local pollution levels, etc.
- To take action – design and carry out an individual and/or group activity at home, at school, or in the community that demonstrates the principle; walk or take a bus, ride a bike, communicate with local leaders, pick up litter in schools or parks, etc.

All these activities are key to helping Earth Scouts learn that they are capable, that they are an important and necessary part of their community, and that both individually and in groups they have the power to have a positive effect in the world.



Example of Class Poster.

The Earth Scouts Facilitator's Guide also offers suggestions for activities for children of different ages. For very young children the guide offers suggestions for how to inform and inspire scouts through storytelling, role-playing, and sharing. For example, kids can be taught about the interconnection of all things by simply being taught about breathing – breathing out carbon dioxide helps plants live, and plants use our carbon dioxide to make the oxygen that we need to live. This information might deepen their connection to trees. Coming up with solutions and taking positive actions takes the learning further. Kids can talk about what happens when forests are being cut down and destroyed, and then explore ideas for taking actions to reduce these negatives, such as planting trees.

Facilitators of children ages three to five have also had success informing and inspiring scouts by reading and role-playing a Dr. Seuss story that emphasizes “sharing and caring,” “playing fair,” and “valuing everyone” – variations on the Earth Charter principles of peace and non-violence, economic justice, and human rights. The story explores the question, “Who does the hard work?” and the work “no-one else wants to do.” Following the role-playing, the kids discussed how they felt, what they thought was ‘fair,’ and what types of work they thought was hard or undesirable. The next time they gathered they discussed one hard job – garbage collecting – with discussions led by the facilitator. Over time, however, the kids took the lead and began thinking of ways to address the issue. They decided to make ‘thank you’ cards and baskets, which they did, and then gave them to their

garbage collectors. One garbage collector was so touched that he said he was going to show his basket to his ten year-old son, so his son could see that his work was important.

For older kids, facilitators and other scouts can educate the group about issues and the application of Earth Charter Principles directly through reading, discussions, and creative group work, such as brainstorming ideas. Using these methods, group members can each choose one or more of the principles to act on individually, or find a common interest as a group and act together on a project. One such group decided to organize a toy sale, and used the money they earned to buy new toys for children at a local hospital.

Other ways to involve older kids is to take them on field trips and make visits to local sites and organizations engaged in the issues the kids care about. Most kids enjoy nature and are positive about visiting wetlands, rivers, and lakes, looking for birds and wildlife, going to parks and nature preserves, and walking in the forests. In addition, kids natural interest in food can lead to visits to local farms, farmer's markets, and food processing plants. These outings can be enriched by enlisting the participation of local naturalists and experts, and of leaders of local chapters of organizations like the Audubon Society, World Wildlife Fund, and the Sierra Club, and Community-Supported Agriculture associations, among others. The guide provides a range of sample activities for older kids, along with additional resources and examples to help groups succeed.

Issues and topics addressed in the guide

The activities in the Earth Scouts Facilitator's Guide can be linked to the following themes derived from the Earth Charter:

Human Rights

- Providing basic needs (food, water, health care, shelter, clothing and education)
- Taking a stand against discrimination
- Protecting from harm

Economic Justice:

- Respecting workers and producers
- Demanding corporate social and environmental responsibility

Participatory Democracy:

- Consensus and group decision-making
- Respecting and valuing differing points of view
- Participating in all levels of local, state and federal government

Peace and Nonviolence:

- Respecting cultural differences and commonalities in the global human family
- Resolving conflict creatively and without violence
- Valuing and practicing cooperation and developing inner peace

Respect for Nature:

- Understanding and respecting how nature's systems and cycles work
- Valuing the natural world as a source of personal fulfillment
- Understanding the impact and consequences of humans on local and global environments

Interaction between facilitators and youth

Children and youth should participate fully in defining the group's activities and in discussing and taking actions on the topics and issues they learn about. While facilitators may need to provide guidance and direction, their main role is to nurture in young people the skills and knowledge they need to build confidence and take actions towards earning their badges and making positive changes in their own lives, in the lives of others, and in the wider world.

Actions and results from the learning process

Earth Scouts learn to put their values in action as they 'take a stand' regarding the issues they study and experience. Skills and techniques to engage in creative problem-solving are covered in the guide, as is an

emphasis on helping youth move from understanding the problem to envisioning solutions and taking actions. For example, in the earlier discussion about what work is not valued in the community – garbage collection – the group decided to take an action ‘close to home’ and give thank you cards and baskets to their own garbage worker. Facilitators can also help youth translate their creative ‘close to home’ solutions to a wider community. In this case it might have been organizing an “Appreciate Your Garbage Worker Day” in their town or sending letters of appreciation for publication in their community media outlets.

The following are a few examples of actions Earth Scouts have taken, and are planning to take, to apply Earth Charter principles in their own lives and in the lives of others.

Jonathan, a thirteen year-old boy in Tampa, Florida started a “Kits for Kids” project for his Bar Mitzvah. He requested that his gifts be in the form of donations to Earth Charter US. He used the donations to purchase the kits, which included school-related necessities such as backpacks, clothing, supplies, as well as disposable cameras and other items, for the children at the Kinship Centre (a programme funded by the Children’s Board of Hillsborough County, that provides support to grandparents raising their grandchildren due to the death or inability of the children’s parents to provide care). Many grandparents are not the legal guardians of these children and have limited access to financial aid, so for some, these kits offer valuable and much-needed supplies. Jonathan reported raising more than US\$3,000 for this project and the Children’s Board is considering expanding this project to other Kinship Centres.

An Earth Scouts group in Portland, Oregon joined an Earth Day celebration, participated in recycled art projects, and attended a Bird Festival, a conference designed to get kids away from television and back in touch with nature – all involving lots of fun, action-oriented activities, and energetic participation with their community.

Several families starting Earth Scouts in the state of Tennessee attended a Green Power Festival and scouts

participated in games and activities at a special “kids energy play shop.” The scouts learned about solar toys and solar ovens, and recycling. After the festival, the group set up an Earth Scouts booth to inform others about the Earth Scouts.

In Phoenix, Arizona one Earth Scouts group is planning to build solar-powered cars, and then race them for fun. One of their weekend outings included attending the Farmers’ Market, and they have also sold products to raise money for a local anti-hunger nonprofit organization. In addition, this scout group went on a camping trip in which all members participated in hands-on service learning projects involving organic gardening, caring for animals and living close to the earth.

Lessons learned

The Earth Scouts programme offers unique characteristics that make it a valuable way for parents and youth to get informed and inspired to care for the Earth and all life. Its unique characteristics are its inclusiveness, making it possible for girls and boys to be in the same group, and its integrative and broad focus, emphasizing the interconnectedness of the environment with social, economic, cultural, and political concerns.

In order to help scouts make these interconnections, group facilitators, educators, and parents need resources that show the relationships between peace, participatory democracy, human rights, economic justice and environmental sustainability. All too often, as Genie Skypok observed, “Parents and facilitators may not know how to get “the big picture” because this kind of analysis is not available in our more common information media, so we need to make these analyses available to them.”

While the coordinators and volunteers of the Earth Scouts programme seek and receive feedback from some groups about the opportunities and actions scouts have taken, they would like to hear more stories. Further, they would like to know how participating in the programme has effected scouts, parents, families, and

communities. The coordinators need to understand how these activities have impacted participants in order to continue assessing, improving, and growing the programme.

The coordinators believe that the Earth Scouts Facilitator's Guide needs to more strongly emphasize the 'action-taking' process and to define it as a necessary requirement for earning a badge. Towards this, programme coordinators are considering

developing an online training programme for facilitators and parents to more successfully lead scouts toward 'action-taking' endpoints and helping scouts fulfill their goal of "acting to improve the world."

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Education for Eco-justice at The Edmund Rice Centre

Alicia Jiménez¹⁸ and Louise Robbards¹⁹

Introduction

The Edmund Rice Centre (ER Centre) is an educational institution involved in research, advocacy, networking, engaging with schools and the community sector, offering cross-cultural immersion programmes and conducting in-service trainings. Amongst the Centre's objectives are:

- Conduct and encourage research into the causes of poverty and inequity in society, with particular regard to youth and Indigenous Australians.
- Promote teaching and experiential learning activities that support awareness, understanding and action in the areas of justice and community issues.
- Facilitate liaison and networking opportunities amongst agencies involved in social justice and community education activities.



¹⁸ Earth Charter Centre for Education for Sustainable Development at UPEACE, Costa Rica
¹⁹ Edmund Rice Centre, Australia

In 2005, the ER Centre began a project to examine how they could better integrate ecological concerns into their work, and as a result started the Eco-Justice project. This project included examining the ER Centre's ecological practices, developing a number of resources on issues of sustainability, and creating the "Pacific Calling Campaign and Partnership," an association of individuals and organizations concerned about Australia's Pacific neighbours, dedicated to helping address the issues arising from climate change in low-lying Pacific nations.

The philosophy of the Eco-Justice project comes directly from the principles of the Earth Charter and the ER Centre aims to integrate these principles throughout their social justice education, research and advocacy programmes. The Pacific Calling Campaign and Partnership is an example of a programme into which the Earth Charter principles have been integrated.

Pacific Calling Campaign and Partnership – changing our neighbour's futures

In May 2006, members of the ER Centre began a campaign in solidarity with people in Kiribati and Torres Strait islands, to highlight the implications of climate change for low-lying islands. It will operate for two years and then will be reviewed. The project has a dual focus: to build solidarity with the peoples of low-lying nations of the Pacific, and to promote transformative education within Australia, in particular within the Australian Catholic community.

The Pacific Calling Campaign and Partnership brings together individuals, a number of religious orders, school groups, and community organizations (primarily from the Catholic community), to make a personal connection with the peoples of low-lying island nations and to advocate for their future. It recognizes Australia's ecological debt to the people of these nations and the need for Australia to take responsibility for its contribution to climate change and the impacts on its neighbours.

The most significant reason why Kiribati and Torres Strait are the focus of the campaign is because these islands

are, on average, only three meters above sea level. As global temperatures rise and ice caps melt, the seas will rise. Any rise in sea level could potentially swamp these flat, low-lying lands, and there are no hills into which local people can retreat for safety. The islands' natural resources and all living things would become directly under threat as people lost their homes and their freshwater sources became increasingly saline. Higher temperatures will increase coral bleaching, and will negatively effect the islands' vegetation and fauna, and high tides and recurrent severe typhoons would cause even greater devastation.

The Pacific Calling Campaign and Partnership calls for action

"[We are]...calling all Australians to develop links with affected people by listening to their human stories and recognizing our ecological debt to the Pacific and Torres Strait Islands for Australia's prosperity. We are also calling the Australian Government to increase development aid to the Pacific and Torres Strait Islands, set realistic emission targets (60% reduction in greenhouse emissions by 2050), increase renewable energy targets to 20.5% by 2010, ratify the Kyoto Protocol and ensure orderly migration of environmentally displaced people."

The Pacific Calling Campaign and Partnership is involved in the following activities:

- Research – creating scenarios for the future, and roles for Australia
- Linking – connecting with I-Kiribati individuals and organizations
- within Australian communities
- Advocacy – using the media and communicating with interested politicians

The Pacific Calling Campaign and Partnership coordinates a network of sixty people, including representatives of religious and community groups, educators, and students. Partners include: Australian Conference of Leaders of Religious Institutes NSW, Catholics in Coalition For Justice and Peace, The Good

Samaritan Sisters, The Missionaries of the Sacred Heart Justice and Peace Centre, Australian Catholic University Institute for Advancing Community Engagement, Catholic Education Office Wollongong, Punake Pasifik Artistic Solution, Pacific Wave Association. The Patron of the Pacific Calling Campaign and Partnership is the Most Reverend Peter Ingham D.D., Bishop of Wollongong, and the president of the Federation of Oceania Bishops' Conference.

Methodological Aspects

The ER Centre's approach to implementing the Earth Charter in their work is two-pronged: to develop ways of integrating environmental considerations into the workplace and staff activities; and to explore ways of integrating the principles into existing social justice education, research and advocacy programmes which are aimed mainly at promoting human rights, such as the Pacific Calling Campaign and Partnership.

Principles of sustainability in the workplace

It was deemed important to ER Centre staff to incorporate the Earth Charter principles they promote in their research and education programmes into their daily lives. To support this practice, the ER Centre held a workshop for staff focused on Principle 7 of the Earth Charter, which encourages people to "Adopt patterns of production, consumption and reproduction that safeguard Earth's regenerative capacities, human rights and community wellbeing." The workshop helped staff identify priorities and targets to strengthen the ER Centre's commitment to improving their environmental performance.

As a result of integrating ecological concerns in the ER Centre's practice, the staff developed environmental action plans and nominated teams to implement actions and monitor progress. Some of the actions include the introduction of worm farming, more comprehensive recycling, and the promotion of fair and sustainable trade.

The ER Centre is also seeking perspectives from various Aboriginal communities in order to explore appropriate ways of incorporating the indigenous relationship with the earth into their work with the Earth Charter.

Principles of sustainability in education

The ER Centre encourages schools to use the Earth Charter. On the ER Centre website, for example, they ask visitors – teachers, students, parents, staff, and administrators – to reflect on the school's management and curricula, inside and outside the classroom. The following are a few of the questions they use to stimulate reflection:

- Is your school keen to improve its role as a place that respects and cares for the earth and for one another?
- Do you want to become a no-waste school by 200X?
- Do you want to see some practical changes in your school such as composting, and less water and energy use?
- Do you want to promote an understanding of how our every day actions affect poorer countries?
- Do you want to strengthen links with your local community?
- Do you want your school to more consciously link ethics with actions?

In addition, the ER Centre offers support to schools interested in bringing about changes in their schools, and to help them generate a more integrated 'whole school' approach – where learning goals and outcomes are expressed in all parts of the curriculum and in the life of the school. In support of schools adopting a 'whole school' approach towards sustainability using the Earth Charter, **the ER Centre has identified the following learning approaches:**

i. Cross-curricular programme – Integrate the Earth Charter principles into existing subjects and/or deliver it as an independent unit of study where the core curriculum allows flexibility. For example, science classes

can conduct school energy audits and develop an understanding of greenhouse science and the impacts of global warming; math classes can calculate the costs of waste in both economic and environmental terms; English classes can write letters to political figures emphasizing the need to support renewable energy and find solutions to deforestation; religious education classes can consider the social justice implications of environmental threats, such as declining water quality and climate change, for people living in developing nations and neighbouring countries.

ii. Extracurricular activities – Teachers and students can set up Earth Charter Youth Groups to develop ways of putting into action the mission and aims of the Charter (www.earthcharterinaction.org/youth/). Furthermore, schools can consider strengthening their linkages with local community and environmental groups, e.g. Landcare and neighbourhood centres. These groups can also investigate what their local council is doing to implement Agenda 21 in their community.

iii. Social Justice Coordinators Network – Social justice coordinators and interested teachers can encourage students to form a social justice group, council, or eco-committee to design and plan initiatives for implementing Earth Charter principles at school.

iv. Religious Education and spirituality – Many young people and adults are searching for a meaningful spirituality, and an understanding of the Earth Charter invites us to a renewed sense of God's presence in all creation; one that promotes an inclusive society living in communion with, rather than exploiting, the earth and one that inspires a sense of awe and wonder.

In addition to offering these learning approaches to incorporate the Earth Charter into education for sustainability, the ER Centre is creating a leadership development initiative, called the EcoLeaders Programme.²⁰ EcoLeaders seeks to develop new and emerging leaders in schools, in the community, and in organizations. Social issues are framed to include the environment, justice and non-violence, underpinned by the principles of the Earth Charter. The Earth Charter is used as an educational tool in the EcoLeaders

Programme because it helps to develop an understanding of the issues and critical choices facing humanity and the urgent need for commitment to a sustainable way of life.

EcoLeaders will be supported via a secure web-delivered, do-it-yourself package, comprised of a five-step annual cycle, a recognition framework, and a collaborative learning and administration system. EcoLeaders is an elective, voluntary curricular activity, operating under the umbrella of a sponsoring school. Students are supported by volunteer mentors – teachers, parents, community members – as deemed appropriate by the school. The Programme begins with a daylong workshop involving students and a core team of teachers, mentors and facilitators. Already there is one school, Mercy College in Parramatta Sydney, an all girls Catholic College, which has contacted the ER Centre and has begun to implement this leadership Programme as a pilot project.

The Pacific Calling Campaign and Partnership includes sustainability in education and research

The Pacific Calling Campaign and Partnership has made great strides in giving a 'Pacific face' to education and advocacy campaigns aimed at reducing Australia's greenhouse gas emissions, building awareness and increasing access to Australia for environmental refugees from low-lying islands. The following sections describe actions taken by the Partnership to achieve its objectives.



Waves coming over the causeway- Kiribati Island.

²⁰ The EcoLeaders Programme is in its early stages and the ER Centre is working in partnership with an independent consultant on its development.

(1) Context-specific research and educational materials

The network partners decided that it was important to understand the implications of climate change throughout the Pacific islands, with a specific focus on the islands of Kiribati. In this sense, they are modeling future scenarios if temperature and greenhouse gases levels continue to rise. The research is intended to provide insight for the following issues:

- Migration: ensuring an orderly migration of environmentally displaced people as the islands will be uninhabitable long before they become submerged
- Refugee status: changing the UN's definition of a 'refugee' to include those affected by environmental factors
- Aid: increasing development aid to the Pacific and Torres Strait Islands
- Emission targets: setting realistic targets (60% reduction in greenhouse gas emissions by 2050) and increasing renewable energy targets to 20.5% by 2010
- Kyoto Protocol: ratifying the Kyoto Protocol and having Australia accept a stronger commitment for the period 2012-2017
- Preparation: training to help citizens of countries that will have to be evacuated

Using the research gathered so far, the staff from ER Centre put together the "Pacific Calling Education Kit" for high schools and community groups. The kit provides adults and youth with a deeper understanding of climate change, puts the current crisis in context and builds a larger picture of issues facing the low-lying Pacific nations by using the small island nation of Kiribati as a case study. Soon the Partnership will add research on the impacts of climate change on the Torres Strait to enrich the kit. The kit is in demand in New South Wales and across Australia. The Pacific Calling Campaign and Partnership also plans to produce a kit for use at the primary school level.

The material in the education kit is suitable for junior science, geography, HSIE (Human Society and its Environment) and English, as well as other areas of the curriculum. The activities have been designed to accommodate a range of grade levels and can be adapted to student capabilities. Activities are accomplished primarily as small group tasks, while relying on the use of DVD, as well as accessing the Internet, to conduct further research and find additional background and resource materials.

**Working together:
the Diocese of Wollongong
and the Edmund Rice Centre**

"The Catholic Education Office in the Diocese of Wollongong has had a long and rewarding relationship with the Edmund Rice Centre in Sydney. In particular, the Pacific Calling Partnership has been a joint venture that has shown the wisdom and experience of the staff at the Edmund Rice Centre, especially in the way they work with school staff and students. The Co-ordinators of the Programme, Jill Finnane and Louise Robards, are very skilled and knowledgeable presenters who are highly sought after in the education sector for running workshops, student seminars and staff professional development days. The Edmund Rice Centre has also produced a number of excellent resources used by schools, and they are currently co-producing a musical resource with the Catholic Education Office which will have wide-spread application in schools in Australia."

*Mark Raue, Head of Religious Education and
Learning Services, Catholic Education Office,
Diocese of Wollongong*

The education kit includes a DVD entitled "Kiribati and Global Warming," produced by a local video production company in Kiribati – Nei Tabera Ni Kai, Inc. (They are planning to produce a version in English to accompany the future Primary School Kit.) The project is also producing a musical CD involving activist song-writers and Pacific and Torres Strait musicians, to help raise awareness of issues associated with climate change – in the hopes of reaching a wider public with the message through music.

Using the ER Centre's DVD – an "eye-opener" in class

"The social justice day presentation to our Year 10s on Pacific and Global Warming by the Edmund Rice Centre team was a real eye opener for our students. I will be using the DVD and kit with my Year 12s when teaching Environmental Ethics in Studies of Religion this year. The DVD is simple, authentic and gets the message across that the island people of Kiribati are feeling the impact of global warming and that we must change."

*Dr John Lee
Curriculum Coordinator, Freeman Catholic
College, Bonnyrigg Heights*

(2) Training on youth leadership

The project is creating a "Youth Skills Exchange and Leadership Training Programme" in partnership with the Sisters of the Good Samaritan and the Catholic Education Office in Wollongong. This Programme was developed in response to the subject of climate change and involves conducting a seminar in Kiribati (October 2007) and sending delegates to the United Nations Framework Convention for Climate Change (UNFCCC) in December 2007.

In the Programme, Australian youth and Kiribati youth will spend a week together in Kiribati sharing their skills

and experiences in social action, environmental change, sustainable living, culture and music. The goals are that by sharing time together, they will learn to listen and understand each other, increase their capacity to work collaboratively, and will create a plan to present at a workshop during the UNFCCC on behalf of Kiribati and the Islands of the Torres Strait. The delegates will include two I-Kiribati and two Australians (one of whom will be a Torres Strait Islander).

These activities are intended to be an experiential learning opportunity that will prepare them to take on strong leadership roles in their communities and open up possibilities for them to work collaboratively with people from different countries and cultures.

(3) Cultural events as part of the education-communication strategy

To increase the awareness of these activities to the wider community, the Pacific Calling Partnership has organized several events, such as the "Voices of the Pacific Conference," hosted by Victoria University; diocesan events; and professional development seminars that have reached 1,500 teachers this year. In addition, cultural events are being organized with the participation of Pacific Island performers (one is scheduled for 15 September 2007). The launch of the music CD will be at a public concert, with entertainment, information, the sale of the Partnership's educational resources, and a speech from a local Member of Parliament.

Lessons learned

Engaging a great number of organizations in the Pacific Calling Campaign and Partnership has allowed the ER Centre to help bring about an awakening within the Catholic community in Australia to their relationship with the peoples of the Pacific and the Torres Strait – as neighbours. According to Louise Robbards at the ER Centre, these efforts to raise awareness on the differentiated impacts of climate change "...is also helping to build a sense of connection between Australians and Pacific Islanders, by celebrating and making known the human stories that bind us."

For the ER Centre staff, education and political action are intertwined. In this sense, the Pacific Calling Campaign and Partnership stresses the importance of recognizing the 'ecological debt' that Australia has to its neighbouring low-lying Pacific and Torres Strait island communities. Australia has a responsibility to help those who are carrying the burdens of ecological imbalances and, towards this recognition, Louise Robbards adds that

"The people from low-lying island nations need our help and understanding to avoid become environmentally displaced people."

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The Earth Charter:
**Environmental Education and
Sustainability Tool**

Fátima Matos Almeida²¹

Introduction



When ASPEA (the Portuguese Association of Environmental Education) adopted the Earth Charter, it became obvious that all, or almost all, of its work and activities were directly linked to the principles and values promoted by the document. ASPEA therefore decided to incorporate the dissemination and adoption of the Earth Charter into its interventions, and to adapt its previously developed activities to promote this integrating document.

ASPEA is a nonprofit NGO founded in 1990, whose main purpose is to develop environmental education in both formal and non-formal education settings. Our work is mainly focused on the training of teachers, educators, and other agents. The key objectives are to promote the exchange of knowledge and information, create spaces for discussion, and provide and implement national and international best practice models of education for environment and sustainability.

²¹ Fátima Matos Almeida is the president of the Portuguese Association for Environmental Education (ASPEA: Associação Portuguesa de Educação Ambiental).

ASPEA members were first introduced to the Earth Charter at the Caretakers of the Environment International Organization Conference in Costa Rica in 1999, at the same time as this document was being drafted. In 2003, an invitation was made to Guillem Ramis, the Earth Charter's 'Focal Point' from Palma de Mallorca, Spain, to make a presentation about his education project, Vivim Plegats, at the XII Pedagogical Conference of ASPEA. His experience and commitment to developing innovative projects and methodologies for education, as well as his creative uses of the Earth Charter, served as a source of inspiration for the adoption of the Earth Charter within our association.

Hence, ASPEA began to systematically gather information and resources through the official Earth Charter website, in order to raise awareness about the notion of sustainability through the document. Teacher training initiatives were launched in the areas of environment, sustainability, citizenship and art. The Child and Youth Forum, an annual event held since 2002 in Aveiro to celebrate Earth Day (April 22), became known as the Child and Youth Earth Charter Forum.

Through a process of reflection, we came to view the Earth Charter as a unique and innovative approach to environmental education. The structured set of principles and values serve to shift the traditional focus of environmental education or environmental problems – waste, energy, climate change, etc. – towards a more holistic framework. This is based on an understanding of the need to explore the relationships between human beings, as well as between human beings and the environment. This approach also enables an analysis of the consequences of our everyday actions on the natural environment to which we belong, and of which we are an integral part.

With the purpose of enhancing the role of education to build sustainable societies, **ASPEA has used the Earth Charter in four main action areas:**

- 1 Formation of environmental educators and monitors.
2. Development of pedagogical resources.
3. Project implementation:

- Earth Charter Project - Live Science (Projeto Carta da Terra - Ciência Viva) and
- Earth Charter Project: A Tool for Sustainability Project (Projeto CTIS - *Carta da Terra Instrumento de Sustentabilidade*).

4. Communication and dissemination of the Earth Charter during all forums in which ASPEA members participate.

1. Formation of environmental educators and monitors

The Earth Charter has been used as a teacher-training tool. The workshops invite participants to read and discuss the Earth Charter document and to watch related videos produced by the Earth Charter Secretariat and by Leonardo Boff.²² Participants are then asked to form small groups and to create a poster, skit, or any other visual display to be presented to the rest of the group.

Between 2006 and 2007, the following training courses were offered: two for tutorial formation; four training sessions for young monitors of environmental education for sustainability; and six brief sessions that were requested by schools and municipal chambers.

2. Development of pedagogical resources

In 2006, the Ministry of Education and the General Direction of Innovation and Curricular Development, edited the Sustainability Guide - Earth Charter, which was translated and adapted from the Earth Charter Teacher's Guidebook. The Guide, resulting from a partnership with ASPEA, was first presented and distributed to nearly 150 participants at ASPEA's XIV Pedagogical Conference of Environmental Education, which took place in Lisbon. Subsequently, we have used this material during joint presentations at similar events. The Guide will also be made available through the website of the Ministry of Education.

At one school, the teachers also translated and adapted an Earth Charter Guide for Children. The pupils produced two videos and two computer games that were inspired by this document.

²² Leonardo Boff is a Brazilian theologian, one of the founders of liberation theology and author of more than sixty books. He is also an Earth Charter Commissioner.

3. Implementation of projects based on the Earth Charter

The “Earth Charter - Live Science” Project

This project used the Earth Charter document as an interdisciplinary tool to offer classes for pre-school and primary school students (from four to ten years of age). These sessions focused on cooperative learning, learning science through hands-on activities, real-life learning situations and basic exercises of experimental science. The project was also intended to encourage teachers to bring more enthusiasm into their pedagogical methods, and to link science-related subjects with the principles and values of the Earth Charter.

The project embodied some Earth Charter principles as guiding forces for children’s education globally, with the view to giving their learning a sense of meaning and promoting actions of respect, concern and responsibility towards the environment.

This project was carried out in 2006–2007 in four schools near Lisbon. It was financially supported by the Live Science Programme of the National Agency for Scientific Culture, and was designed to sensitize pre-school and primary school teachers about one of the greatest environmental problems that humanity faces in the new millennium – climate change.

A significant overlap was found between the teaching of experimental sciences and the principles of Earth Charter:

Principle 1 - Respect Earth and life in all its diversity; (community of life; citizenship duties)

Principle 5 - Protect and restore the integrity of Earth’s ecological systems, with special concern for biological diversity and the natural processes that sustain life; (waste, consumption and conservation; biodiversity)

Principle 6 - Prevent harm as the best method of environmental protection and, when knowledge is limited, apply a precautionary approach; (pollution, energy and climate change)

During the course of this project, six hands-on sessions were held in every class of the partner schools. Additionally, two field trips were carried out with nearly 200 children and their respective teachers participating. The field trip to the Lisbon Forest Park was organized for the youngest pupils, featuring nature exploration games and activities. Meanwhile, older students participated in a visit to the National Engineering, Technology and Innovation Institute, where they learned about clean and environmentally-friendly sources of energy, especially sun and wind.



Field trip to Parque Florestal de Monsanto with primary school.

Earth Charter Project: A Tool for Sustainability (CTIS Project)

This project is based on a methodological proposal for applying the principles and values inherent to the Earth Charter within the context of the United Nations Decade of Education for Sustainable Development (2005-2014). This proposal is broad in both scale and scope-international (Countries with Portuguese as Official Language - CPLP), regional (Europe), national (Portugal) and local (Regional Education Co-ordinations).

The purpose of the project is to turn schools into educational poles for sustainable development, and to turn citizens into knowledgeable agents for change. This mission should be carried out within the framework of the Earth Charter’s values and principles, and through their dissemination and implementation by all educational actors in the community.

- **At the local level**, the project has been developed at the Regional Education Coordination of the Algarve region. Several primary and secondary schools have been involved: the Group of Schools of Salir (Loulé) and the Group of Schools of Algoz (Silves), among others.
The project is expected to expand to other Regional Education Coordination areas, as suggested by the interest shown by schools, authorities and other stakeholders involved in Education for Sustainable Development (ESD).
- **At the national level**, a committee was created to involve representatives of the Ministry of Education (General Coordination of Innovation and Curricular Development) and the Ministry of Environment (Institute of the Environment), as well as the National Committee of UNESCO as an observer entity.
- **At the regional level**, in January 2006, a collaboration agreement was signed with the Salamanca, Spain-based Local Initiatives of Castilla and Leon Foundation (Fundación Iniciativas Locales, Castilla y León), for the school year 2006–2007. The latter, in coordination with ASPEA, also developed a parallel project in Portugal.
- **At the international level**, a partnership was established with the Community of Countries of Portuguese Language (CPLP) to share the experiences and materials developed during the course of the project. Primarily involved in the collaboration have been those countries where the need for Education for Sustainable Development is considered to be the most pressing.

The general objectives of the project are to:

- Transform the school into a pole of information production and dissemination regarding Education for Sustainable Development. The school should also be an agent for intervention and social mobilization, one which is operated by students and their families. In one case,

families supported the students in producing a video about waste, both past and present. This video featured a re-enactment of a picnic held thirty years ago and a picnic in the present-day context. Students were then asked to compare the difference in the quantity and quality of waste produced in the two examples, and to reflect on Principle 7 of the Earth Charter as it relates to the video.

- Contribute to the dissemination and implementation of the United Nations Decade of Education for Sustainable Development (DESD) and the strategy of Education for Sustainable Development of United Nations Economic Commission for Europe (UNECE). News has been published about the actions carried out at the schools, through an online blog and through various local communication agencies. The project has also been included in the efforts of the Decade at the national level, through the Portuguese Committee of UNESCO.
- Identify a set of indicators to measure the project's level of success, as well as the participation levels and contributions of different entities for the Decade.
- Encourage the pedagogical use of the Earth Charter and other related resources.
- Compile and create documents and materials supporting pedagogical methods and the dissemination of best practice examples within the framework of the Earth Charter.

Generally, the project includes a teacher training workshop, a local evaluation and follow-up of the project, a Child and Youth Forum, and a seminar for teachers. We believe that the development of professional competencies for teachers and educators within the field of Education for Sustainable Development is fundamental for realizing the objectives of the Decade regarding the implementation of educational policies, as well as for putting into practice the Earth Charter's principles and values.

Within this context, the Project involves three main stages for training professors and other technical partners: a periodic follow up of acquired skills; a periodic follow-up in the field; and ongoing knowledge exchange and skills transfer between colleagues and project partners. This structure is intended to, among other aims, facilitate thinking about the theoretical basis of ESD and about the methodologies required to explore the Earth Charter and its educational use, as well as to evaluate processes and results.

Each teacher, within his/her discipline, is encouraged to work in a transversal and interdisciplinary manner; to select one or more principles of the Earth Charter in collaboration with students; and to structure a project whose final outcome will be presented to the entire scholastic community during the Child and Youth Forum, which is held at the end of every school year.

The Project, during its pilot phase in 2005–2006, paved the way for an initial evaluation of its methodology. All the involved stakeholders, partners and teachers/educators, considered it to be a project of *high pedagogical value for thinking and disseminating of Education for Sustainable Development practices*. There was a general consensus to continue to support and develop the project.

In 2006–2007, the Institute of the Environment and the waste management company ALGAR, announced their funding of the project. One participating school involved a total of 125 students from five Grade 7-8 classes in the Project. Teachers from Visual and Technological Education were in charge of coordinating this initiative. The final product of this work has been a collection of 30 posters with illustrations and taglines alluding to Earth Charter principles and values, as studied and selected by the students.

A group of schools from the city of Salir involved 13 teachers and 291 students, from different disciplines and different levels of primary education, in the Project. The schools produced and distributed a collection of eight post cards that were illustrated by students on the basis of Earth Charter principles. The 16 principles of the document were transcribed on 2,000 post cards, thanks

to funding from the Municipal Chamber of Loulé. The local community publicly commended the outcome of this project during commemorative events related to Sprig Day, held in May.

In addition, an Earth Charter Child and Youth Forum was held in Algarve in 2007. The 300 participants included students, teachers, parents, heads of education and different entities within the project, technicians and members of local organizations.

This forum, by giving a leading role and voice to children and youth, served to publicly highlight the results of those projects that had been elaborated by four schools involved.

This Project has enabled curricular content and interdisciplinary subject areas to be incorporated into the diverse initiatives undertaken by the partner schools in Education for Sustainable Development and environmental education. These were then contextualized within the framework of national and international objectives and strategies by providing interveners with a theoretical basis and a policy guiding pedagogical practice within the field. Further details about the project can be accessed by visiting the blog: <http://is-ct.blogspot.com>.

In general terms, the methodology for applying the *Earth Charter Project: A Tool for Sustainability*, is structured as follows:

Teacher training workshop

Teachers involved in the project must attend a Training Workshop for promoting competences in the field of Education for Sustainable Development in general, and for exploring the pedagogical value of the Earth Charter in particular.

Pedagogical exploration of the Earth Charter in the classroom

Pedagogical exploration is based on the development of professional competences within Education for Sustainable Development, as well as on the pedagogical use of the Earth Charter by other teachers, regardless of

educational level or discipline. **Examples of competences include to:**

- Identify which Earth Charter principles are suitable and relevant to their teaching practice.
- Integrate them into their classes (e.g. course content).
- Write a report detailing all activities that were carried out, identifying: which is (are) the principle(s) and value(s) of the Earth Charter that were selected for pedagogical exploration; which course content served as a base for this exploration; and, what is the pedagogical methodology employed.

Meetings with education authorities and other partners

In addition to the school meetings required for developing the project, the coordinator(s), once appointed, should participate in the Local Committee of the project.

Contact with the community

It is crucial to develop a non-formal education programme for local community members within the framework of life-long learning. In Algarve, for example, the In Loco Association is designed to develop such initiatives in partnership with local schools/groups. Within the context of developing an Earth Charter for a community (Commitment Charter), it might be useful to draft a questionnaire for members of the local population. First, this questionnaire will serve to raise awareness about the project, the Earth Charter and the Decade of Education for Sustainable Development. Additionally, it will obtain valuable input from the local population for the creation of their community's Commitment Charter.

In addition to sensitizing participants about adopting more sustainable ways of living, each class/ school/ group/community should create a Commitment Charter – summarizing the vision/reading of the students (and other members of the educational community) about the principles and values inherent to the Earth Charter. These Commitment Charters should become the base for the project's final product.

Lessons Learned

After two years of experimenting with the pedagogical use of the Earth Charter, we can confirm that the Earth Charter is a very useful tool for developing the professional competences of educators and teachers regarding Education for Sustainable Development. This is indispensable for educating our children and youth for a better world. The vast diversity and amount of documents available on the Internet offer good support resources for teachers' work. However, it is also crucial to offer training sessions and promote knowledge-sharing, as well as to carry out follow-up visits and project evaluations in the schools, in order to achieve project objectives and build sustainable partnerships.

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For youth, by youth:
**Using the Earth Charter to raise
 awareness among university
 students**

Shafía Súcar Súccar and Magdalena Sandoval²³



Introduction

Dr. Shafía Súcar Súccar, Coordinator of the Institutional Programme on the Environment (Pimaug Programme) at the University of Guanajuato in Mexico, uses and promotes the Earth Charter as a pedagogical tool. She is convinced that "...our present-day situation has emerged as a result of the type of relationship that we, as human beings, have had with nature, with other human beings and with the broader web of life."

According to Dr. Súccar, the Earth Charter, in addition to being a compendium of values and principles that can be integrated into our everyday lives, appeals to both our rational and emotional faculties. The document thereby offers a more holistic and balanced means of understanding the environmental problems that we face today. She and Professor Magdalena Sandoval, also involved in the Pimaug Programme, are committed to encouraging university students across all disciplines to assume a sense of responsibility towards realizing sustainability principles.

²³ Dr. Shafía Súcar Súccar is the coordinator for the Institutional Programme on the Environment (Pimaug) at the University of Guanajuato in Mexico; Magdalena Sandoval is a professor at the University of Guanajuato, and is also involved in Pimaug.

The starting point for this case study came when the University of Guanajuato decided to incorporate its values and principles into administrative activities and academic content. Faculty members of the Pimaug Programme called upon Bachelor's degree students across all disciplines to undergo the necessary training to become Youth Promoters of the Earth Charter at the University.

In 2005, three Environmental Engineering students expressed an interest in completing the University Social Service component of their programme as Youth Promoters of the Earth Charter. These students underwent a training process specifically designed for this purpose, and acquired the skills required to independently facilitate Earth Charter workshops, for youth and by youth.

Between the second semester of 2005 and July 2007, a total of 27 workshops were facilitated by Youth Promoters of the Earth Charter, for youth and by youth. Approximately six hundred students, as well as numerous professors and administrative staff, have participated in these workshops. The total number of people having benefited from the training is undoubtedly higher, estimated at 3,000 people.

The following are the short and medium-term objectives of the University of Guanajuato:

- To increase the number of students promoting the Earth Charter;
- To maximize the dissemination of the Charter inside and outside of the University;
- To promote the Charter among the university's staff and faculty; and,
- To generate spaces for debate and discussion, among other activities.

Significant progress has already been made in achieving the objectives set out for disseminating and training with the Earth Charter. Two additional objectives that have already been realized include: the University of Guanajuato's official endorsement of the Earth Charter; as well as the design and printing of the Earth Charter for the State of Guanajuato, and the distribution of these

pamphlets at workshops. It is important to mention that the printing of the first 2,000 copies of the Charter was made possible thanks to the support of the University of Guanajuato and the Ecological Institute of Guanajuato.

Additionally, in March 2007, the First National Training Workshop for Youth Promoters of the Earth Charter was held and hosted by the University of Guanajuato. Approximately 44 students from higher education institutions from across the country were in attendance and, as a result, the National Network of Youth Promoters of the Earth Charter was formed.

Future objectives and current perspectives

The objectives set out for the short-, medium- and long-term are designed to assist us in expanding the knowledge and internalization of the Earth Charter principles within the university sphere. In our opinion, this is a crucial factor in ensuring that environmental issues are taken into consideration in all the activities and decision-making processes of the university.

Within this context, it should be mentioned that the University of Guanajuato, along with eleven other Mexican universities, joined together to create the Mexican Consortium of University Environmental Programmes for Sustainable Development (Complexus). This university network aims to incorporate an environmental perspective into all of its academic programmes through a cross-disciplinary



Activities at the Earth Charter Workshop - University of Guanajuato.

approach, and to provide ongoing training to teaching faculty on environment and sustainability-related topics.

Complexus has also drafted a range of related documents, including a declaration of support within the framework of the United Nations Decade of Education for Sustainable Development, which was signed in January 2006, by each of the universities' twelve Rectors. This document is a significant indication from higher education institutions in Mexico and in Latin America of the necessity to make important changes towards building a more sustainable world.

What has also emerged is a series of ambitious objectives relating to the implementation of the Earth Charter as an essential tool for education for sustainable development; as a key element in community service, research and extension projects; as a support to educational materials and publications; and, above all else, as a reference point to the everyday pedagogy of teaching staff. This document is thereby perceived as bearing a significant impact on the learning processes of students and the overall performance of the university.

Methodological Aspects

The University's training workshops for Earth Charter promoters are designed for young people between the ages of 16-25 years, and have relied, in large part, on the invaluable assistance of Mateo Castillo Ceja, an Earth Charter International Council Member, and other members of the National Earth Charter Secretariat in Mexico. Over the years, youth participants have acquired the skills necessary to modify and improve the design of the workshops. Their input has also enhanced the originality of the sessions, and has made them more accessible to, and attractive for, young people, particularly those based in the State of Guanajuato.

Earth Charter workshops

At the time of writing this case study, there are three different versions of the Earth Charter workshop: each one lasting 4 hours, 8 hours, or 14 hours. The main mission of all the workshops, regardless of duration, is

to encourage young people to reflect on Earth Charter principles, to internalize them, and to become committed to putting into practice those values selected by each participant. Some minimum criteria and conditions have been defined for the effective implementation of Earth Charter workshops, and these include the following:

- Indoors space: a hall with suitable ventilation; natural light and the possibility of making the room dark in order to use the projector; comfortable chairs and movable tables, placed in a horseshoe shape
- Outdoor space: close to the hall, with vegetation and the possibility of carrying out group activities
- Materials used: digital projector, screen, flip chart, different coloured markers and recyclable paper
- Food and drinks during breaks: natural and healthy; set of re-usable dishes
- Clothing worn by the participants: comfortable and appropriate for outdoor conditions

The following table details the programme for an eight-hour workshop. The phases remain the same across all three versions of the workshop, though the exercises vary and the length of time devoted to them is adjusted according to the target group.



One of the activities at the Earth Charter workshop - University of Guanajuato.

Programme for an 8-hour Earth Charter Workshop

Phase	Duration	Exercise	Objective
Introduction and integration	20 min.	Introduction. Mending the world. Earth Charter video.	Sensitize participants about the themes to be covered in the workshop
Need for an Earth Charter	20 min.	Presentation by the facilitator.	
Reflection	20 min.	Reflection. Discussion.	
Antecedents	30 min.	Memorama.	Provide a brief historical overview of the Earth Charter
Earth Charter Initiative	30 min.	Presentation by the facilitator.	
Break			
Preamble of the Earth Charter	30 min.	Presentation by the facilitator. Dissemination of the Earth Charter.	Directly engage with each participant by personally handing out the Earth Charter
Getting to know and internalizing your Charter	180 min.	Teamwork: Find the Values and Prioritize Them. Feel the Earth; Stereotypes.	Invite the participants, through group work, to internalize, define and put into practice the values and principles of the Earth Charter
Break			
Uses of the Earth Charter	30 min.	Inflated globe; Round table.	Invite the participants, through group work, to internalize, define and put into practice the values and principles of the Earth Charter
Tapping into Our Creativity	60 min.	The Human Box; Feeling the Beat.	
Signature of Personal Endorsement	30 min.	Commitments.	Ask each participant to make one or several individualized commitments, and encourage them to incorporate the Earth Charter values and principles into their everyday lives

Detailed descriptions of the activities outlined in the 8-hour workshop

Mending the world

Material: sheets of paper, pens or markers, computer and projector

Procedure: Project an image of the Earth onto the wall. Ask the participants to identify what they consider to be the greatest problem that exists on our planet, and then to draw it or to write it down. Once completed, all participants should post their visual or written response on the projected Earth. Invite the

participants to study the problems listed and to propose a few solutions for each. The purpose of this exercise is to reflect on the role of human beings in causing and solving global problems.

Memorama

Material: a stack of cards on which the antecedents and history of the Earth Charter are written, computer and projector

Procedure: After the Earth Charter has been distributed to participants, and overviews of its antecedents and history have been provided, divide

the group into two teams and give each a stack of cards upon which the antecedents are written, but not in the correct order. Each team has to re-configure the cards into the right chronological order, and the first to finish becomes the winner. This exercise reiterates the importance of teamwork, and enables participants to familiarize themselves with the history of the Earth Charter.

Find the Values and Prioritize Them

Material: Copies of the Earth Charter, paper and markers

Procedure: Distribute copies of the Earth Charter and divide the group into four teams. Each team is assigned to one section of the document, to identify the values contained within it, and to write them down. Once this has been completed, each team should select two values that it considers are lacking in modern-day society, and to describe these values in their own words. At the end of the activity, teams share the values they have chosen and their own definitions with the rest of the group.

Stereotypes

Material: adhesive labels with qualitative adjectives such as: fat, envious, beautiful, avaricious, bad, idiotic, ugly, etc.

Procedure: Post a qualitative adjective on the back of a few participants without telling them what the label is. The remaining group members must treat these participants according to the label on their back until the 'stereotyped ones' guess the correct adjective. At the end of the activity it is useful to reflect upon stereotypes and discuss why human beings tend to judge others by their appearance. This exercise teaches the values of social equity, respect and non-discrimination.

Feel the Earth

Process: In an open space (preferably a garden), invite the participants to relax, to close their eyes and to begin to feel with their remaining senses, by touching, smelling and listening to their surroundings. The objective is to have participants directly connect with the Earth, to get back in touch with those sensations that are often overlooked or neglected in the fast-paced rhythm of our lives.

Inflated Globe

Material: a globe

Procedure: All of the participants are asked to remain silent. Without warning, one of the workshop facilitators begins to walk around the entire hall while slowly inflating the globe with his/her breath. A sense of frustration arises in the classroom as the participants do not know what is going on and as the globe continues to expand. The facilitator continues to inflate it until it reaches the bursting point. After the commotion subsides, invite the participants to describe the emotions that they experienced, as the globe was about to burst. An analogy can be drawn with the planet Earth and the feelings of helplessness that arise amidst the environmental crisis. Encourage the participants to assume an active role in proposing a solution that could improve the relationship between human beings and nature.

Human Box

Material: plastic crates (refreshment containers) one for every ten participants

Procedure: Divide the group into teams of ten, and tell them that all team members must climb on top of the crate and stay there for at least a minute without touching the floor. At the end of the activity, the winning team must explain the factors behind its success. These are likely to include effective coordination, teamwork and utilizing individual abilities.

Feeling the Beat

Procedure: Ask the participants to run to the beat of the selected music or to undertake any other intense physical exercise (dancing, jumping, etc.) for three minutes or until their heartbeats rise. Invite the participants to place their hand to their heart, to reflect on what they have learned over the course of the workshop, and to identify a commitment that they would like to make towards the planet Earth, our home. At the end of the activity, the participants can share their thoughts and commitments with the group, or keep them quietly to themselves. The intention is for every participant to set out and implement goals geared towards realizing sustainability principles.

Lessons learned

For the University of Guanajuato, the Earth Charter is an educational tool undergoing constant growth and evolution. For this reason, we look forward to designing and launching new initiatives that – in addition to feeding into this current project – will motivate and attract a growing number of young Earth Charter promoters. These activities will include a campaign to raise awareness about the Earth Charter across campus through informative posters; and a series of conferences and debates to be held on a wide range of issues, including those values that have been identified as lacking or absent in modern-day society.

An analysis of the University of Guanajuato's experiences using the Earth Charter over the past two years has enabled us to identify several areas of success, such as the ongoing recruitment of youth promoters. Another successful venture has been the ongoing evaluation of the workshops' content and facilitator roles, in order to continuously improve the training programmes. Overall, the initiative has benefited greatly from the insights of promoters involved since the beginning of the project, from the ideas shared by new participants, and from experts in the field.

The Earth Charter project has increased in scale and in scope, both at the University of Guanajuato and in Mexico. It has become one of the key action areas of the University's Institutional Programme on the Environment to promote the training of community members, in general, and university students and staff, in particular.

In addition to our successes, we have also made our share of mistakes – from which we have learned to improve our workshop methodologies and evaluations. Those teams containing many youth promoters have generally not functioned as effectively as those in smaller groups. This is due to the fact that the more participants involved, the more difficult it is to coordinate group meetings, during and after the workshop. Therefore, we have tried to limit the size of the promotional teams to six participants, in order to minimize geographical disparity and to facilitate group organization and performance.

Students can sign up to become a promoter of the Earth Charter as part of the University Social Service component of their programme. However, since the dissemination activities require more time and dedication than other projects, there has been a lack of interest and commitment on the part of some students. In reality, the main problem is that the Service is often viewed – by both professors and students – as a mere formality, and thereby it loses its true meaning as a channel for community service. Fortunately, however, many students are committed to dedicating the necessary time and effort to their service. These are the students who are needed for ambitious projects such as the Earth Charter, which might require a little bit more dedication but which ultimately reap great rewards.

An important but underdeveloped area relates to the design and application of indicators to measure the qualitative and quantitative impacts of the Earth Charter project, both inside and outside the University of Guanajuato. The evaluations that are currently carried out at the end of each workshop (as previously mentioned) have been very useful to improve and adapt the content of training sessions, including modifying exercises, support materials and the ongoing professional development of workshop facilitators.

In our opinion, a crucial starting point would be to evaluate the extent to which our university's students have benefited from participating in the Earth Charter workshops. This would enable us to assess the added-value potential that the knowledge, internalization and implementation of Earth Charter principles have had on young people and on their area of influence.

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Improving the quality of life in the communities of Sao Paulo

Aieska Marinho Lacerda Silva²⁴ and Tarcisio Cardieri²⁵

Introduction



The project “Young Friends of Nature” was created to produce visible results in the areas of sustainability and structural change in various communities in Sao Paulo, Brazil. It is an initiative of the Association for Nature Conservation and Improvement of the Quality of Life (BioMA Institute), in partnership with Sebrae-SP (support office for small and micro-enterprises in Sao Paulo). In 2001-02, the BioMa Institute did not initially succeed in realizing its goal of promoting integrated and sustainable development in the settlements of the Pontal do Paranapanema region. After an evaluation of the project, it became clear that in order to bring about positive change and better connect with community leaders, a new project would have to be launched. This time, the focus would be on working primarily with students and teaching staff. This decision was based on the recognition that teachers are an intrinsic part of any community, with a significant influence on many citizens.

²⁴ Bioma Institute President, Sao Paulo, Brazil

²⁵ Researcher, Amana-key, Sao Paulo, Brazil

BioMA Institute and participating Organizations

The BioMA Institute is a civil society, nonprofit and public sector organization. The Institute was established in 2002 following its participation in Project 7 Sigma, an initiative promoted by the Brazil-based management firm Amana-Key that dealt with the theme of societal change and reinvention. The mission of BioMA Institute is to promote the improvement of people's quality of life through human development projects, in order to disseminate and transfer knowledge about sustainable and supported development.

The Institute's mission is carried out through projects with this focus and objective in mind. The projects are executed through partnerships with public agencies, schools, universities, companies, associations, and other non-governmental organizations. These efforts target Brazilian regions with a low Human Development Index.

The Institute's projects have been financed by the National Fund for Development and Education (FNDE, Fundo Nacional de Desenvolvimento e Educação) and the Ministry of Education and Culture (MEC, Ministério de Educação e Cultura). The Institute has also received support from the Secretaries of Education from fourteen cities; participating schools and their members; the Social Service of the Industry (SESI); of the municipality Presidente Prudente, and the Naia Institute.²⁶

Philosophy of the Project

The "Young Friends of Nature" project involves the analysis of problems and issues affecting local schools and their communities. The BioMA does not focus on a few selected aspects of the learning environment; instead, we adopt a holistic approach to study the entire educational setting, which results in a better quality of life for all involved. This is our central mission and philosophy. The aim of the project is also to acquire knowledge about the localities, and to improve relationships with their community members. This project seeks to always take into account the realities of the communities and of the participating schools.

Description of the activities

In each of the participating schools (usually comprising a group of approximately 300 pupils), a university trainee acts as a monitor to distribute questionnaires, undertake a survey, and employ other instruments to observe and consult on the local situation.

By working closely with the schools' teachers and pupils, the university trainee is asked a seemingly countless number of questions relating to community development and general social issues.

For example, issues of race, gender, religion, sustainable development, misery, hunger, health, access to information, violence, social and economic justice, and peace have all been identified as areas of concern within the school environment. It has become clear that teachers and pupils are very aware of those issues that must be addressed in order to successfully achieve their – and our – common objectives.



Students and teacher sharing about different interrelated issues.

The active participation and feedback of school stakeholders has been very encouraging. As a result of the Institute's activities, each school has been able to identify its most pressing needs and concerns. Together with the local communities, the school has then been given the option to develop (or not) a small project, utilizing local resources for support as well as the guidelines and supervision of the BioMA Institute.

²⁶ The Naia Institute developed a version of the Earth Charter adapted for children, which the Bioma Institute has used in its work.

The Earth Charter has been used as a framework for discussing and analyzing each situation presented in the classrooms. The Charter has helped to introduce and promote the idea of executing sustainability-related activities among parents, teachers and community members.

The key has been to involve the local community, to disseminate knowledge, and to enhance the dignity and autonomy of the community members. Empowered, each individual has been given the power to enact change and to contribute to the promotion of an improved quality of life and sustainable development within his/her own community.

Timeframe of the Project

The "Young Friends of Nature" project began in May 2005, and continued over the course of the next two years. In twelve cities of the Pontal do Paranapanema region, the project was launched in January 2006, and lasted for six months. Approximately 11,000 pupils, 32 municipal primary and secondary schools, and 500 educational professionals participated directly or indirectly in the project. In the city of Sumaré, the project was initiated in May 2006 and is still in progress. Similarly, projects continue to be ongoing in five different schools, comprising approximately 6,500 pupils and 150 educational professionals.

Objective

The main objective of the project is to put into practice those principles and values that promote respect for the universal values of human life. Disseminating information and raising awareness among participants, who will then strive for solutions in their own localities, can help achieve this objective.

Methodology²⁷

The Earth Charter serves as the fundamental core of all our activities. The main objective of the latter is to involve the greatest number of educators and young

people possible in building a society that promotes the values of sustainability. Until the time of writing, the project has already been carried out in more than thirteen cities, reaching 37 schools, 600 educational professionals and 17,000 pupils.

The project is designed to be carried out in the following six phases:

1st Phase: Sensitization and trust building among the participants.

2nd Phase: Insight into the realities of each school through the use of various instruments, such as surveys, questionnaires, and live diagnosis. Through this phase, a deeper knowledge can be acquired about the local problems faced by the schools and communities.

3rd Phase: Enhancing the capacity to dream – through the use of pedagogical tools such as the Construction of the Dream Tree and the Wall of Lamentations.

4th Phase: Increasing the awareness of the principles and values of the Earth Charter.

5th Phase: Design and implementation of new teaching activities that address those problems identified during the live diagnosis. The new activities can then be used to complement the existing school curriculum, and are aimed at promoting the Earth Charter principles.



Students reading and drawing the Earth Charter principles.

²⁷The central methodology of the project was designed in collaboration with partner organizations and, in particular, through the participation of the following advisors: Dr. Maria Rita Avanzi (Doctor by Education Faculty of USP); Alessandra Buonavoglia Costa Pinto (Master in Environmental Science by USP); and Elisandra Girardelli Godoi (Master in Education by Unicamp).

6th Phase: Promotion of activities to be undertaken by schools and communities, in order to form concrete action plans aimed at providing a navigable path to sustainable development.

Project's Steps

In this project, each participating school is invited to map out some problems or situations needing to be addressed or changed. For example, one school identified the over-consumption of natural resources as a problem, including the excessive use of water and food. Principles three to six of an adaptation of the Earth Charter for children were used as pedagogical tools to bring these subjects to the fore. Our project facilitators then discussed these problems with the pupils and teachers, and these themes were re-visited through games, readings, and songs. The latter activities proved to be useful in terms of analyzing the problem and searching for appropriate solutions and actions.

Here, creativity helped put the principles into practice. Teachers from across various disciplines have since drawn on similar pedagogical methods in the classroom to approach questions and themes in a creative and multidisciplinary manner. The following are two examples of this type of approach.

Example one: Wasting water and other natural resources

The first step was to determine how water was transported to the school, and to verify the supply source (i.e. from which river, lagoon or dam). Second, a collective effort was made to evaluate the water's quality, how many litters the school consumed, and how much the water cost. Drinking fountains, toilet bowls, leakages, and garden irrigation were identified as the main sources of wasted water. To conclude, we disseminated information about which actions could be taken by pupils and school community members – once they had this information – to modify the situation and prevent wasting this natural resource. To further address this problem, the school community launched a school campaign to reduce the waste of water by 20%.

The school adopted an interdisciplinary approach to solve the problem. Math teachers and students developed graphs on consumption and values. Portuguese Language teachers drafted pertinent texts to describe how the water was being transported to the school. Science and Geography teachers focused on topics related to local relief, fountains, rivers, and pollution, among others. Art teachers produced drawings and maps about the way in which the water travelled from reservoirs to the schools.

Example two: Problems during school mealtimes

Through an analysis of the school's mealtime periods, it was determined that the presentation, as well as the manner in which food was served to children, was unsatisfactory. The children did not use tableware, such as forks and knives; instead, they only used spoons. The pupils were not capable of serving themselves; they had to be served by adults. Also, the use of glass plates was forbidden due to their perceived risks for children; instead, they were substituted by disposable plates, thereby producing more waste. The menu was found to lack the variety of foods necessary for a balanced diet. This was primarily due to the methods used to process the food, which furthermore generated a substantial amount of waste in the cafeteria.

To address these issues, the school community launched an initiative to construct a vegetable garden, orchards and seedbeds of condiment herbs in the school yard. This initiative was aimed at improving and diversifying the menu offered to the children, as well as enhancing the overall school environment.

To ensure an interdisciplinary approach, teachers from all subject areas were involved in contributing to the:

- Development of vegetable gardens and seedbeds of condiments to increase the variety and improve the lunches served at the school.

- Monitor the wasting of food, by using different measurements and graphics. Evaluations and demonstrations were carried out daily for the pupils.
- Campaign for effective organic and non-organic garbage packaging aimed at reducing the number of pigeons around the school. The latter problem had been caused by the fact that foods were not being appropriately discarded.
- Utilization of tableware such as forks and knives to teach the children how to use these utensils.
- Modification of the lunchtime routine so that the pupils are encouraged to serve themselves and sample new foods. This promotes a healthy change in dietary habits, as well as a process of socialization whereby the pupils discuss what to eat and where to sit (rather than being required to sit in their designated classroom). By serving themselves, the students also create less waste in the form of unfinished food. Furthermore, this helps to significantly reduce the workload of assistants and school cooks.

generate a more holistic and innovative way of understanding its respective field.

The integration of the Earth Charter into pedagogical methods and practice has promoted new learning dynamics among pupils. This has enabled students to acquire unique learning experiences through new subject areas such as ethics, environment, and solidarity. These new lessons address local issues, such as exclusion, race, religion and natural resources, and bear a direct relevance to everyday life. This has enabled the Institute to raise awareness of the importance of universal humane values and of the principles of sustainable development among students and staff.

Through the project, the participating schools have also been able to operate collaboratively as a network. This has enabled an increasing exchange of ideas between schools and communities, particularly now that group meetings and discussions are held every month. All of the resources used in the project activities were made readily available to the schools. The vast majority of activities also applied the rule of the Four R's: Reuse, Reduce, Recycle and Rethink.



Example of a vegetable garden.

General Observations

Overall, the great advantage of using the Earth Charter as a pedagogical tool is that it does not necessarily have to conform to a rigid structure. All of the content and subject areas of the Brazilian national curriculum can be approached through the four pillars and principles of the Earth Charter. Any discipline can utilize the principles to

To develop concrete classroom activities, the pedagogical supervisors of the project and the trainees carried out research to find texts, songs, films, and books that could be related to the theme and principles of the Earth Charter. The projects always started by identifying the problems and themes to be explored, and then incorporating these into classroom activities and content. The ultimate result should always be concrete action.

Schools having participated in the "Young Friends of Nature" initiative have already begun to develop their own projects, **such as:**

- Creation of a family support centre
- Organic and non-organic vegetable gardens and orchards
- Herbariums
- Improvement of the school environment through the adoption of practices such as using tableware, diversifying the food menu and nutritional education
- Construction of parks

- Creation of a recipe book of Brazilian herbs and condiments
- Plantation of native forestry
- Creation of a book chronicling the history of the school's conservationist efforts and the positive effects of this on the community.

Lessons learned

It is urgent and necessary for education to incorporate a diversity of learning methods, activities and subject areas within its curricular parameters. An emphasis should be placed on human rights to guarantee the same educational and personal achievement opportunities for all. In this project, the Earth Charter has served as an effective pedagogical tool and as a guide for future actions to be carried out by the participating schools.

According to José Francisco Pacheco from the Bridge School (Escola da Ponte) of Portugal:

...it is a serious mistake to think that a society of individual, participatory, and democratic individuals can be built, if the notion of schooling continues to be conceived as a mere cognitive dressage...it is urgent for us, as individuals, to directly engage with local communities, to question their convictions and, fraternally, to challenge the existing ones.

For this project, the implementation of the Earth Charter principles through an inter-disciplinary approach constituted an ideal and cost-effective approach. We think that the latter approach can be adopted by any educator, in any discipline, in any school, in any country, with relative ease. It is extremely accessible to students of any demographic setting, and in both formal and informal learning environments. The principles are easily understood and have the power to modify behaviours and make operational actions that promote sustainable development.

Plans are already underway to release a book, entitled *Histories of Learning and Teaching*, to feature best practice examples of the project. This will include articles and testimonials from participants and educators who generously contributed their time and efforts to the "Young Friends of Nature" project. The text will also highlight best practice examples of activities undertaken by the participating schools, so that other schools might learn from the great successes that we have had.

Overall, the project is a great testament to the user-friendly nature of the Earth Charter programme. It is our core belief that only when learning – based on universal humane values – becomes widespread across both formal and informal learning environments, will we have the chance to create a more sustainable form of development that will benefit the entire 'earth community.'

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PRIMARY & SECONDARY EDUCATION



Reorienting Tatarstan's educational system towards education for sustainability

Ljubov V. Ovsienko²⁸

Introduction



The Republic of Tatarstan²⁹ is located about 700 km east of Moscow and is one of the largest republics of the Russian Federation. It is a semi-autonomous, multi-ethnic Republic with a population of four million people, representing a diverse mix of three main cultural and religious groups: Mongol/Asian from the east of Eurasia (10%), Muslim Tatars from the south (50%) and Russian Orthodox Christians from the west (40%). A similar cultural and religious mix led to war in Yugoslavia; however, Tatarstan has chosen a different course focusing on the need to protect its natural environment and create conditions that promote tolerance, social justice and peace.

²⁸ Dr. Sc. Ljubov V. Ovsienko is the Deputy Minister of Education and Science of the Republic of Tatarstan.

²⁹ Tatarstan is located in the centre of the Russian Federation on the East European plain. People of more than 70 different nationalities live there, the most numerous being Tatars and Russians.

In early 2001, the Parliament of Tatarstan embraced the principles of sustainable development expressed in the Earth Charter and instructed governmental agencies to find practical applications for its principles in their work. The Republic of Tatarstan has implemented various programmes on ecological education and is presently developing economic mechanisms for the management of natural resources and the reconstruction of destroyed ecosystems.

“We should bear in mind that this is not just an ecological programme. It integrates economy, politics, ecology, and education. It works for the sake of ethnic-religious tolerance and for the advancement in the living standards of our people.”³⁰

Within the framework of the existing project, *Tatarstan: Territory for a Culture of Peace, Sustainable Development and Tolerance*, the Republic has launched a large-scale effort to implement an Earth Charter and Culture of Peace Programme throughout its educational system. In accordance with the decisions of the Parliament, the Ministry of Education and Science is shifting its traditional discipline-oriented curriculum towards a competency-based model, built around a number of themes and areas of learning. The Ministry now sees its main task as educating the new generation of Tatar citizens to be responsible and active citizens seeking solutions to environmental problems, promoting responsible management of natural resources and sustainable lifestyles, and creating a culture of peace and tolerance.

The Ministry considers the Earth Charter as an appropriate ethical framework for educating the next generation of engaged citizens, who will live and work in a context of rich cultural traditions and diverse religious backgrounds. Tatarstan is indeed fertile ground for three key concepts embedded in the Earth Charter: respect for all life, respect for one another, and respect for the Earth.

Kindergarten and pre-school education

In consideration of its rich cultural and religious diversity, Tatarstan has developed a specific system of kindergarten and preschool education based on the

principles of respect and care for other human beings. This includes compassion for those who have less and for those who belong to different cultures and religions. With some ethnic Russians practicing Islam, and some Tatars practicing Christianity, all the people of Tatarstan have a common interest in caring for the Earth and its living community, and in undertaking the common quest towards the restoration of their devastated environment.

Kindergarten and preschools provide an opportunity to begin the process of developing children's attitudes and values of cultural tolerance and care for the community of life. From the age of three to six years, children are the most open to being informed about nature, the interconnectedness between all living beings, the basic principles of a sustainable way of life, and moral and ethical behaviour. Preschool institutions in Tatarstan are focused on creating a special educational environment to enhance children's capacity for development, and the development of age-specific educational methodologies. A lot of attention is being given to the creation of special green areas, flower gardens and vegetable strips, so-called 'Alpine hillocks,' and to ecological pathways, where the youngest children can play, study and learn outside.

Teachers use nature and its beauty to demonstrate the wonder of nature's richness, and to explain the importance of protecting plants and animals, fertile soils, pure sources of water, and clean air. Small children are deeply moved by visual, aural, and oral interactive activities presented in the form of plays, songs, poems and fairy- and folk-tales. For example, it is a common practice to use traditional Tatar and Russian proverbs, sayings, tales and songs as an unobtrusive way of introducing important, and sometimes abstract, concepts in a flexible and interactive manner.

Combination of formal and nonformal education for sustainability in secondary schools

Many educators often use the concept 'education for sustainable development' (ESD) in order to describe the pedagogical activities of environmental education.

³⁰ M. Shaimiev, president of the Republic of Tatarstan in his Annual Address, 2007.

However, the former cannot be seen as a mere sum, or combination, of the goals of environmental protection and the improvement of the quality of human life. Environmental education has many approaches, which include: education about the environment, focusing on increasing levels of knowledge and awareness of the environment; education in the environment, involving the developing of attitudes and skills through experiencing the natural environment; and, the more radical, education for the environment approach, analysing power bases and social structures, incorporating Southern voices and seeing the environment as socially determined (Downs, 1994 and Tilbury, 1995).³¹

The national system of secondary education in Tatarstan is taking initial steps to integrate the Earth Charter principles into educational processes built around the interdisciplinary model – the interrelationship of formal curriculum and extracurricular activities, with the help of elective studies and scientific and study groups of students.

The introduction of the subject 'environmental studies' into the secondary school curriculum may seem to be an outdated activity given the advent of education for sustainability. However, this has been a revolutionary step for the education system of the Republic of Tatarstan. The main goals of this new educational initiative are to increase the presence of environmental education within the formal curriculum in Tatar schools; to improve it through the integration of environmental issues across a number of disciplines; to enhance teachers' interest in democratic ideas and processes; to support teachers to use various environmental education methodologies; and to encourage teachers and students to become actively involved in the protection and conservation of the natural world.

The Ministry of Education and Science takes pride in the fact that almost 150 secondary schools in the republic have included the subject 'environmental studies' in the formal curriculum of their secondary and senior years. Today, more than 5,000 students attend elective studies in ecological research, economic development, and social issues while approximately 9,000 students

participate in 553 ecological study groups. Students are encouraged to become actively involved in the preservation and improvement of their immediate surroundings, which in turn develops a sense of responsibility towards the environment. Through this process of learning, the Ministry aims to shape a new generation of engaged citizens that will prevent environmental crises from deepening, protect nature and promote a more healthy society.

These scientific, action-based research programmes in secondary schools focus on:

- The indepth study of nature
- The assessment of the ecological situation in the students' local habitat area, including the consequences of human impact on nature
- The state of the population's health, and the creation by students of indicators for ecological monitoring

In spite of these achievements, the lack of substantial materials and methodologies on education for sustainable development was felt acutely by the Ministry, educational research institutions and school teachers. This situation needed to be addressed.

Methodology and curriculum development

Within the context of Tartarstan's Parliamentary Resolution to implement the Earth Charter principles, the Ministry was given a special assignment to prepare and publish three textbooks on the Earth Charter, for primary-, middle- and high-school students. The content of the textbooks had to include issues relating to both natural and social sciences based on international experience, and also include a special "Earth Charter course" for teachers.

The Ministry developed a five-year action plan as a result of consultations with experts and secondary school teachers to find better ways to integrate sustainable development issues and the Earth Charter principles into formal and non-formal education in the Republic.

³¹ Downs, E. "Education for Sustainability: is the whole more or less than the sum of the parts?" *Development Education Journal*, Issue 2, December 5-8, 1994.

Tilbury, D. "Environmental education for sustainability: defining the new focus of environmental education in 1990s." *Environmental Education Research*, 1 (2):195-212. 1995.

This plan defines the development of the pedagogical curriculum and sets the direction for practical work, for teachers and students.

As of 1 September 2007 (the official start of the 2007-2008 school year in the Russian Federation and Tatarstan), every public school in the republic was provided with an Earth Charter toolkit: student textbooks and guidebooks for the teachers. This new set of education materials was developed by several working groups of prominent scientists from the Republican Research Institute for Educational Development.

The Earth Charter toolkit

Teacher's guidebooks, tailored to different grades and subject areas, were developed for three sets of teachers:

- primary school teachers
- secondary school teachers of history and social sciences
- secondary school teachers of natural science

The need to introduce primary school students (grades 1–7) to the basic principles of ecology, culture and human relations is reflected in the methodological recommendations for primary school teachers. In order to ease the introduction of complex issues to small children, the guidebook shows how to effectively use field trips, children's literature, folk- and fairy-tales, as well as interactive, solution-oriented tasks.

The full text of the Earth Charter is included in the guidebook for teachers of history and social sciences at secondary schools (grades 8–11). The methodology of the application of the Earth Charter as a framework is recommended for teaching the themes of General History, History of the Russian Federation, and Social Sciences.

The guidebook for teachers of natural science at secondary schools (grades 8–11) offers methodological materials and sample lesson plans for various subjects: Math, Russian Language and Literature, the Arts (music, drawing, and acting), English, and Political Science. It

also offers innovative suggestions on extracurricular activities related to ESD.

The toolkit offers teachers various lesson plan models for classroom use. The first recommended methodology is presented as an interdisciplinary study of a complex problem covering different subjects. For example, as teachers present the problems of the modern economy, they motivate students to learn about existing unsustainable methods of production and consumption. Students are also motivated to study ways to adopt behavioural patterns and choices that promote the development of economy and industry while safeguarding Earth's regenerative capacities, human rights and community wellbeing.

As students learn about social relations, they are encouraged to know more about racial, ethnic and religious conflicts, social injustice and ways to prevent and address these issues. Several lessons are dedicated to Russia's place in the global community, and the challenges and drawbacks of its transition from a centralized to a market economy (using Pillars II and III of the Earth Charter in the analysis, "Ecological Integrity" and "Social and Economic Justice"). The combination of the national and regional components of the suggested methodology gives students the opportunity to become aware of interrelationship of the issues and problems facing local and global communities.

Authors also suggest that another methodological approach is to have students examine one of the Charter sections, principles or sub-principles, reflect on these, and then share their reflections with their friends, families, and community members.

The Ministry has announced a series of demonstration lessons, based on the methodologies to integrate sustainable development, the Earth Charter and the new educational materials into daily teaching practices. The demonstration lessons will be held simultaneously in all schools of the Republic. Some of these lessons will be open to media coverage.

The Ministerial website (<http://www.tatedu.ru/>) provides many resources to support education for

sustainable development and the Earth Charter. Among other materials, it offers the Russian version of the Earth Charter Guidebook for Teachers "Bringing Sustainability into Classrooms" developed and published by the Earth Charter Initiative. The website also displays a variety of sample lessons on sustainability, ethical values and principles, and suggests an interdisciplinary approach as the guiding methodology. It also serves as a discussion forum and gives space to teachers to share their educational experiences and scientific research in education. The Ministry will also identify those key educational institutions that will serve as clearinghouses for new methodologies in teaching and learning for sustainability.

In September and October 2007, the Ministry convened a series of seminars and roundtables for teacher trainers and in-service school teachers. In the context of this training initiative, the Ministry announced a contest for the best project on the vision of a 'school of the future.'

Innovative approaches to extracurricular (elective) education

Teachers are given the opportunity to independently design small-scale education projects focused on developing students' competences and skills in dealing with environmental and social challenges. Within the context of the generally-approved formal educational curriculum, these mini-projects provide curricular opportunities to build on students' initiative and ability to become responsible citizens – in particular in a society undergoing a major transition to an open and democratic society. It is very important to provide teachers with a certain degree of independence in developing their own pedagogic approaches and methodologies, as this enhances their sense of responsibility and confidence in curriculum development. The main requirement for teachers to participate in this initiative was the use of an interdisciplinary approach to developing their methodology. This has improved the cooperation and connection between colleagues who teach different subjects.

Although knowledge is a powerful tool, it doesn't mean anything unless it's used for the improvement of

humankind and the preservation of nature. This is why it's important to boost students' interest in learning and getting more deeply involved in practical activities. A variety of ongoing, nation-wide initiatives promote this outcome.

Students' participation in national contests such as My Little Homeland, Nature's Corner, and Nature's Mirror, encourage students to research natural, national, historical and cultural heritages of Tatarstan and Russia, and teach them to treat the community of life with compassion and care. The following are descriptions of two such contests.

My Little Homeland

In order to enhance students' feeling of ownership and pride about their national history, traditions and culture, the ministry holds an annual national contest entitled "My Little Homeland." This features three possible focus areas: "A little corner of great Russia," "History," and "Our national traditions." Participating students get to know the historical uniqueness of their own villages and towns; compile biographies of their fellow-villagers who made a difference in the history of the town and nation; study the culture and the genealogy of their family and clan as well as the culture and folklore of the peoples that live in their region; and learn about their relationship with nature.

The Young Shoot

In the context of the international Earth Charter Initiative, students participate in an annual contest entitled "The Young Shoot: Preservation of Nature and Care for Forests." The focus areas are: "The ecology of the wildlife," "The ecology of wild plants," "Forestry," and "Forest in Literature." To participate in these contests, young forestry specialists must research complex environmental issues such as the greenhouse effect, forest degradation, the formation and depletion of the ozone layer, acid rain, overpopulation, and pollution, as well as possible methods and means for solving these problems.

Apart from the contests, there are many opportunities for student learning and action. There are more than

200 school-protected forest areas, where students provide tangible assistance to forest wardens and biologists – planting new trees, green belts, and picking wild medicinal herbs. Students organize contests, quizzes, and discussions with the members of their communities; put on environmental plays; hold exhibitions; clean parks and gardens; plant new trees; clean school territories and neighbouring communities; take care of forest springs; hold conferences on consumerism; and create, publish and distribute educational leaflets calling for more sustainable lifestyles.



Textbook *The Earth Charter for secondary Schools* published by the Ministry of Education of Tatarstan.

One of the important conditions for the accomplishments described in this case is the unique atmosphere of national and religious tolerance in the republic; the culture of peace and cooperation; and love for nature. These are rooted in centuries-old traditions that are carefully being preserved in modern-day Tatarstan.

Learning and living the principles of the Earth Charter is a powerful way of introducing the message of sustainability. It also provides opportunities for those who want to teach and learn about ethics and a broad vision of a sustainable society. The formal education system of Tatarstan leads the way in offering an interdisciplinary and values-driven approach to addressing the complexity of sustainability issues in secondary education. This initiative demonstrates that education can and should play a greater role in developing students' active citizenship, environmental awareness, and sense of respect and responsibility, which will support the political and socio-economic transformation towards a more mature democracy.

Conclusion

The activities described above contribute to raising student awareness and involvement, inspiring young people to live and act in harmony with the ethics and principles of the Earth Charter. The engaged participation of the Tatarstan leadership – in the implementation of sustainable development values in the formal education system – have contributed considerably to the implementation of the new educational initiative.

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Earth Charter Booklets for Pre-School and Primary School Children

**Enriqueta Medellín and Gina Mireya Ventura³²
and Betty McDermott³³**



Introduction

For many years NGOs and schools, with the support of specialists, have made the effort to improve environmental education in Aguascalientes, Mexico. In general, the work focused on providing information on environmental issues and on Aguascalientes' ecosystems. This has undoubtedly contributed to environmental awareness among the local society. This work was carried out in classrooms and workshops in state Centres for Environmental Education.

However, sharing information on the environment did not move citizens to curb their region's environmental deterioration. In light of this, and familiar with the Earth Charter, Conciencia Ecológica de Aguascalientes (CEA) an NGO, decided to share the Earth Charter in an aspiration to inspire and encourage citizens to be active on environmental issues.

³² Conciencia Ecológica de Aguascalientes, Mexico

³³ The Earth Charter Centre for Education for Sustainable Development at UPEACE, Costa Rica

It is through the use of the Earth Charter that CEA introduced a group of teachers to the Earth Charter and took on the task of disseminating it among teachers, parents, and college students. Gradually, the social dimension of the Charter was incorporated into environmental education efforts, offering a more holistic approach. However, the teachers noticed that the Earth Charter was perceived as a traditional part of the school curriculum, it became 'just another textbook.'

In response, in 2002 Escuela Secundaria General N° 15 (No. 15 Secondary School) chose to implement a pilot project to sensitize students about the need for – and the uses of – the Earth Charter. It was also decided that the broader educational community (teachers, principals, administration, students, and parents) would be involved in the project by engaging in the work and reflecting on the principles and values this instrument can provide.

To complete this task, the school board appointed Doctors in Education, Gina Ventura, Ana Lilia Paredes, and Enriqueta Medellín to be in charge of the project. They held workshops with teachers to identify how they could apply the Earth Charter in the classroom. Parents helped to better understand the significance of the Earth Charter in daily life. Students used the Internet to research the World Summit on Sustainable Development (concurrently taking place in Johannesburg), to learn about sustainability. In addition, murals were painted, and stories and poetry were written. At the end of the semester, the project closed



Pilot project with second grade students.

with a moving event where students presented the Earth Charter from their perspective and made personal commitments to the principles.

Despite its many successes, teachers strongly felt that introducing the Charter was a burden. Therefore, to address the teachers' needs, booklets were developed to facilitate the teachers' implementation of the Earth Charter.

Description of the Earth Charter booklets for children

The main objectives were:

- To contribute to the integral education of our students by participating in meaningful, creative, and practical experiences to help them develop skills with which to address intra- and interpersonal challenges.
- For students to understand and engage with the Earth Charter's vision of respect, love, and cooperation.

Using this context and the framework of the 2005–2014 Decade of Education for Sustainable Development, four booklets were designed from pre-school through to sixth grade that highlighted the values and principles of sustainability.

The booklets most outstanding features are:

- a) They encourage the development of students' competence, abilities, skills, and values towards sustainability, as well as individual cognitive and practical development, such as: abstraction, spatial situation, and creativity.
- b) They can be applied to a range of educational settings.
- c) They were designed as self-teaching instruments for children, from the second grade onwards.
- d) Their can be easily incorporated into regular teaching schedules.
- e) The lessons are derived from the Mexican version of the Earth Charter for children.³⁴

³⁴ In Mexico, several teachers identified the need to develop a children's version of the Earth Charter. They proceeded to design it based on the official international text of the Earth Charter; it was later published by SEMARNAT (Ministry of Environment and Natural Resources).

- f) The material contains a chart for teachers, which gives clear examples for applying principles of the Earth Charter to different subject areas.
- g) Each booklet contains a series of activities for students to help them learn about and uphold each principle of the Earth Charter.

A sample exercise from the Earth Charter booklets:

The Earth Charter for Children

1. **Respect and protect people, animals and plants.**

- a. Always respect the way of life of people, animals and plants, even though they may appear to be strange or different to you.
- b. Provide plants and animals with care and protection.
- c. Fight against the indiscriminate killing of animals.
- d. Help protect endangered plants and animals, and never capture or purchase any of these species.

Look closely at the drawings on the left column and draw a line connecting each with one in the right column which represents what we should do in order to live and respect Principle 1 of the Earth Charter.

<p>A boy with a sling-shot killing a bird.</p> <p>A girl bending a small planted tree.</p> <p>A person smoking in a place where there are children.</p> <p>Some children and their mother buying a parakeet.</p>	<p>Two boys tying a stick to the trunk of the small tree for support and then watering the tree.</p> <p>Some children tell the smoker that the smoke is harmful to them (they cough) and to please smoke outside.</p> <p>Another boy prevents the one with the sling-shot from throwing stones at the birds.</p> <p>The children tell their mother not to buy parakeets.</p>
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Implementation and testing

The booklets were created and implemented in two phases of the pilot project. During the first phase in October 2006, the first edition of the booklets (200 for each grade) were printed with support from the Town Council of Aguascalientes. At this time the Institute for Education of Aguascalientes (IEA) trained teachers, from pre-school and primary classes of CEPIA, an urban, middle-class school, and tested and adjusted the materials to most effectively incorporate the Earth Charter's principles with the school system. In May 2007, the mayor of

Aguascalientes distributed the booklets among the children.

The second phase of the pilot project is being carried out in six schools in a range of urban, sub-urban, and rural settings. With the application of the pilot project and tests of the materials, valuable educational information will be gained and used to enrich them, ensuring that the materials are relevant and pertinent, and also significant to the students attending the IEA. The given questionnaires have been answered and processed. Next, a group of consultants will follow-up on the pilot test.

Methodological aspects for the pilot tests of the booklets

The sample of schools will include six schools (three grade schools and three pre-schools): four schools served by the Institute of Education of Aguascalientes and two private schools. Approximately 600 students from rural, urban and sub-urban areas will be involved, as well as 3 consultants (one for every two schools), 12 teachers (three for pre-school, three for 1st and 2nd grades; three for 3rd and 4th grades, and three for 5th and 6th grades), and three external editors. **The educational staff involved will participate as following:**

Teachers

Teachers will be participating in the training workshops on how to incorporate the Earth Charter in education. This will also include clarifying the content, reviewing the materials, making suggestions, and sharing their findings with the consultants.

Consultants

Pre-school Coordinators, staff from the IEA, and staff from the Secretariat for Human Development in the Municipality of Aguascalientes (who attended the Earth Charter workshop) will support in various ways.

External Editors

The external editors will review the booklets, offering comments for their enrichment and improvement. These comments are expected to be included at the end of the year.

Activities

The activities in the workbook are designed to help children understand, experience and be an inherent part of the ten principles of the Earth Charter (as configured in the children's Mexican version). Working in the classroom with the Earth Charter does not require teachers to change the school schedule because several educational areas of the curricula bear a close resemblance to the Earth Charter's principles. Teachers are encouraged to

adapt the booklets to their needs, taking into account the following **methodological considerations**:

1. Working with each of the Earth Charter principles allows the development of capabilities in different educational areas; prioritizing which one(s) to focus on depends on the purpose of the educational experience. The primary goal is that children enjoy the experience and put the principles into practice in their daily life.
2. The Earth Charter principles do not have a pre-established sequence. They can be explored randomly, according to children's interests and the real problems that exist in the classroom and/or in their social and natural environment.
3. It is important to consider that children need creative and reflexive activities in order to learn, develop their imagination, and enjoy and resolve problems that are important to them; for this reason, the activities presented in the booklets are ideas which require children's inputs to develop the principle and make it resonate.
4. The proposed activities should not be carried out in an isolated manner; they should be part of a plan that seeks the development of the selected competences.
5. That children should learn to respect human beings, animals, and plants; to recognise and value the traditions and customs in their communities; and to resolve problems in a peaceful way, through interaction with nature and with people from different social and cultural environments.
6. Allowing a child to come up with alternatives for problem-solving and to put into practice his/her hypothesis, gives him/her the opportunity to amass more solid knowledge, which can become an integral part of his/her personal values.
7. It is important to tell children there are certain problems to which we do not have answers; by offering alternatives less harmful to people and the environment, we can adopt a positive attitude and work for improvements within our own abilities.

8. Alarmist terms should not be used, as they serve to make children adopt a pessimistic attitude; we must try to seek solutions and alternatives with the firm conviction that any contribution will make a big difference.

9. Follow-up and debrief with children after all activities in order to check for significant changes in their attitudes. Some children will show an initial positive response that fades with time, it may be necessary to encourage them on a daily basis.

Chart of suggestions on how to use the booklets in the different subjects and programme content

Principle	Grade	Subject	Purpose	Content
2	1 st	Natural Science	That the students may acquire knowledge, capabilities, attitudes and values reflecting a responsible interaction with their natural surroundings, and understand the operation and transformations of the human body and the development of habits for the preservation of their health and wellbeing.	1 st Living things. - Plants and animals
	2 nd			2 nd Living things. - Care and protection of all living things around us: plants, animals, and human beings.
4	1 st	Geography	That the students may practice describing sites and landscapes, and begin making symbolic representations of the physical spaces of which they are most familiar.	1 st Town and country. - Town and country environmental concerns.
	2 nd			2 nd Life in the neighbourhood. - Activities which are harmful to the environment in the neighbourhood, and ways to prevent them.
7	1 st	History	This discipline has a special educative value. Nevertheless, it also works as a contributing factor to acquire personal ethical principles and values for social interaction.	1 st Before and after in personal history.
	2 nd	Civic education	That the students may develop attitudes and values which provide him/her with strong foundations to become a citizen aware of his/her rights, the rights of others, and one who is responsible, free, cooperative and tolerant. The goal is to develop Mexican citizens to be respectful of the cultural diversity, and capable of analysing and understanding the actions and numerous expressions of the human mind.	2 nd Time in the personal and family history. - Changes in customs and daily activities of the family during the course of time.

4	3 rd	Mathematics	That the students may obtain basic knowledge in mathematics and develop: - Spatial imagination - Abstract thinking through various forms of reasoning, among others, processing and generalizing procedures and strategies.	3 rd Handling the information. - How to approach and resolve simple problems in which you wish to gather and record information on a regular basis.
	4 th			4 th Handling the information. - Gathering and recording data stemming from observation. 4 th The wealth of the country.
7	3 rd	Civic education	That the students may gain the attitudes and values which will provide him/her with strong foundations to become a citizen aware of his/her rights, the rights of others, and one who is responsible, free, cooperative and tolerant. The goal is to develop Mexican citizens to be respectful of the cultural diversity, and capable of analysing and understanding the actions and numerous expressions of the human mind.	3 rd Equal rights of Mexicans.
	4 th			4 th The rights of Mexicans.
9	3 rd	Spanish	That the students learn to seek information, and to value, process and use it both in and out of school, and engage in independent learning processes.	3 rd Literary recreation.
	4 th			4 th Situations in communications. - Writing.
	3 rd	Artistic education	That the students may develop a taste for artistic expression and the ability to appreciate and distinguish various forms and resources. To stimulate sensitivity and perception through involvement in activities in which he/she may discover, explore and experiment with expression in materials, movement and sound. To develop creativity and the capability of personal expression.	3 rd Art appreciation and expression. - Handling symmetry.
	4 th			4 th Art appreciation and expression. - Making banners.

Lessons learned

One serious challenge we have is trying to adapt our schedule to that of the public administration and services. For example, printing the booklets required

twice as much time as we estimated. This significantly delayed our work.

The task of incorporating the values for sustainability into the teaching practice must be linked to the students' daily reality, so that they will value its application in their

lives. When we tried to work on the Earth Charter without this component, we realized that we were unable to convince students to make changes in their daily behaviour.

There is no doubt that this endeavour has greatly contributed to our outlook and ability to address environmental concerns. However, if we can't appeal to people's conscience, we will never achieve the changes we strive for. It is not enough to promote the values for sustainability and the principles of the Earth Charter with rhetoric only. It is essential to find the right mechanisms

to study these values and principles in class on a daily basis. This is, by far, the biggest challenge. But if the materials are well designed and the teachers are well trained, then the objectives can be achieved.

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Learning to see the big picture with the Earth Charter!

Sue Gibson³⁵

Introduction



Wondai is a small rural town situated in the South Burnett region of Queensland, Australia. We live within the Burnett Catchment³⁶ in an agricultural area that grows a wide variety of crops throughout the year. Wondai's timber industry is as old as the town itself, and the local sawmill is one of the biggest employers. Water is a critically important resource for our community, and we are currently feeling the strain of an ongoing drought and its negative effects on the local economy.

Our school is situated in a spacious setting in the south-eastern corner of town with forests on two sides and the town's show grounds on another. The school motto is "Deeds not Words." It caters to 270 students from prep (6 years old) to 10th grade (15 years old) that allows for sharing and learning across grades. Wondai State School P-10 has a sustainability ethos, and is part of the Reef Guardians programme, the Green and Healthy Schools programme, and the Sustainable Living Challenge.

³⁵ Wondai State School P-10, Queensland, Australia

³⁶ A catchment, or basin, is an area of land within which water eventually runs to one point.

Teaching about sustainability

The process of incorporating sustainability into our curriculum began in 2004 when the Curriculum Implementation Committee recognized the potential of student-directed, action-oriented learning as a means of engaging students in real-life learning. This decision was influenced on the success of a 9th grade trial science unit in 2003 that used an action-research model to investigate the issue of our local water's increasing salinity level. This unit was so successful in engaging learners, we decided to develop a secondary elective subject, called Action Science, based on the model. This commenced in 2004 and ran in the first semester of each year until 2007, when we decided to offer Action Science throughout the school year. Students investigate local environmental issues and formulate action plans aimed at making a positive difference in the community. From this simple start, increasing our students' awareness of local environmental issues became a focus for the school; our sustainability journey had begun.

The next significant stage in our journey was having a teacher and two of our students attend the Earth Dialogues International Conference in Brisbane in July 2006 as part of the Education Queensland Student Delegation. This involvement fuelled our recognition that, although what we were doing in our own little corner of the world was very valid and important; we were missing the big picture! To be educating young people about truly sustainable living we also needed to be tackling issues of poverty, peace and politics, on a global scale.

In order to expand our approach to teaching about sustainability to include social, economic, and political issues, as well as incorporating a global focus, we decided to use the Earth Charter as the underlying philosophy of our curriculum decision-making and to underpin our unit planning. After discussing these ideas with our principal, and with other teachers at a staff meeting, we decided to use a simplified version of the Earth Charter (from a Dutch children's poster) that outlines **the four pillars of the Earth Charter** as

follows:

- Be kind to each other, animals and plants (Respect and care for the community of life)
- Take good care of the environment (Ecological integrity)
- We are all equal (Social and economic justice)
- Say 'yes' to peace and 'no' to violence (Democracy, non-violence and peace)

The implications for a school community, if all members upheld these four simple principles, are both exciting and challenging. We think that the understanding of, and adherence to, these principles could significantly increase the potential for engaging students in real-life learning and improving student outcomes.



Learning about our place in the world.

Methodology

The decision to implement the Earth Charter's four basic principles was straightforward because they mesh well with our existing school vision "Grow Together – Produce the Best," which is supported by our school values: Respect, Academia, Participation and Pride (RAPP). We have a whole-school approach to supporting the positive mental health of our children, and this has led to the primary school's involvement as one of fifty schools in the National trial for Kidsmatter (an effort lead by the Australian Principals' Association, Federal Government, Beyond Blue and the Australian Psychologists Association).

Through Kidsmatter we have endorsed “Programme Achieve/You can do it” as a major focus for the development of positive social and emotional learning for our primary students. This programme focuses on five keys to success: Confidence, Persistence, Organization, Getting Along, and Resilience. Our secondary school’s skill-building programme focuses on Goals, Relationships, Attitudes and Beliefs (GRAB), and we ensure that the key concepts from the primary grades are extended through secondary. We believe that this approach to developing the skills our children need to be confident and capable members of society matches perfectly with our RAPP and the Earth Charter values.

Our Earth Charter methodology is simple:

- Embed the Earth Charter principles in unit planning and school decision-making
- Refer to the Earth Charter whenever possible in daily classroom life
- Act as role models, and persevere, persevere, persevere!

The first step in the process was putting teachers into planning teams to map out how the Earth Charter could be used as an underpinning philosophy for current and future units of work. Teachers examined available Earth Charter resources (DVD, posters, web resources) and were each given an Earth Charter poster to put up in their classrooms. The result of this day was the development of our 2007 Sustainability Action Plan,



Learning about the diversity of life.

which encompasses the curriculum, the management of our school grounds, our environment and resources. We have found this method of planning for the year positive and beneficial. It provides an overall picture of where the school should be heading, and acts as a tracking tool throughout the year to see how well we are achieving the targets we have set.

In some units, the Earth Charter itself is a major theme, and in others it is an underlying thread. An example of the former is our second term of 8th grade GRAB unit (1 x 70 minute lesson per week for 10 weeks). This unit explored the theme of ‘interconnectedness’ and how it linked to the Earth Charter. **This unit investigated three authentic learning questions:**

1. How will a more sustainable world help me?
2. How can we use the resources in our environment and maintain biodiversity?
3. How can our water resources be used more sustainably?

Students began this unit by investigating how children live in other parts of the world by getting on the Internet and researching issues through online resources. Their findings culminated in the creation of a PowerPoint presentation about the Earth Charter, sustainability, and ways to build a sustainable world.

During this unit, students also brainstormed actions they could take as a class to ‘live out’ the values and principles they were learning about in class. These actions include organizing a “walk to school” day to combat greenhouse gas emissions, making and displaying banners and posters, adding an Earth Charter stall at the school fete, having a “multicultural cooking day,” and organizing Earth Charter wristbands for staff, students and the community to wear. While some of these actions have yet to be organized, the most rewarding aspect of this unit has been seeing the students so enthusiastically engaged in discussions and decision-making, rather than sitting back as passive learners. In addition to creating a list of action ideas, the students have written an Earth Charter song for the school (see below).

Box 2: Wondai State School Earth Charter Song

This is our future, this is our home
We need to care for
This great biome
Respect each other, our planet too
Enough for us, enough for you.

Chorus

This is the Earth Charter of Wondai School
It's how we want to live and it's pretty cool
We have enough for us, plenty more to share
We want the whole wide world to know we care.

This is our vision, a sky of blue
Clean air to breathe, for us for you
Healthy forests, water that's clean
Sparkling oceans, paddocks of green

Chorus

Care for each other, respect all life
We want world peace, not war and strife
No threatened species, habitats for all
We need to plant trees, not make them fall

Chorus

We are all equal, we all have needs
Care for our Earth, we'll take the lead
Respect our planet, each other too
Enough for us, enough for you

Units with the Earth Charter as an underlying thread occur across disciplines and grade levels. Our 6th grade class takes a unit entitled "Threatened Species" in which they take on the role of wildlife rangers. They investigate threatened species with the 'job assignment' of designing sustainable habitats for these species, and then they must present their findings to an audience. Students have completed research reports on their species and built models of the habitats they have designed. They are also organizing a "Threatened Species Day," to be held at the school in the fall. This

unit is designed so that the learning approach is student-centred, within an active, real-life scenario – being wildlife rangers and designing habitats – rather than simply being taught about threatened species. The unit is also based on the Earth Charter principles within the bigger picture: respecting those with whom we share this Earth and living in a way that doesn't negatively impact their wellbeing and our environment.

Another example of students learning in an active, real-life scenario occurs in our 5th grade class. They have been conducting an electricity audit of our school and are developing a plan to reduce our energy consumption. Students have been actively investigating the numbers and types of school appliances and the impact their use has on our resource management. They have also produced wonderful clay animations to promote sustainable energy use.

Our emphasis is on learning *for* sustainability and not learning *about* sustainability, with a focus on students developing knowledge and skills for life-long learning and taking action. The teacher is a facilitator of learning rather than simply a teacher of content. The students' activities and assignments are developed to encompass the global picture, as well as to have a local impact. **In so doing, students consider the following questions:**

- Why are we concerned about our school energy use?
- How does our energy use affect us locally?
- What does our Earth Charter say?
- How will reducing our energy use here help our Earth and others living elsewhere?
- How can we teach others about sustainable energy use?

Action Science is a lead Middle Phase of Learning strategy at Wondai P10 State School and is one of our curriculum success stories. It is an environmental science elective that investigates local issues using the action-research model. This is being achieved through the delivery of a practical, real-life learning model for students.



Tree planting day.

Our approach embraces our young people's initial abstract thinking about global issues by linking them directly to everyday local environmental problems. Action Science has indeed always been underpinned by the principles of the Earth Charter, even though we didn't formally recognize this. Our implementation of the Earth Charter into our school curriculum has added another positive dimension to Action Science; students are able to see the importance of their local work more clearly in terms of its global impact. It reinforces the idea that we all have a role in creating a sustainable future and that each positive action contributes to the wellbeing of our planet and its inhabitants.

The key features of Action Science are the development of:

- Enterprising, life-long learners, who regularly and actively participate in our local catchment issues and therefore the global environment
- Learners as investigators of local area sustainability issues through the adoption of the Action Research model
- Partnerships with local landholders, private businesses, government departments (including Department of Natural Resources, Kingaroy), Burnett Mary Regional Group (BMRG), and the Burnett branch of the Queensland Rural Women's Network

The Action Science elective is available to all students from grades 8-10 (13-15 years old). The programme

format allows students to choose to join a work team based on their interests and skills, which helps ensure inclusiveness and maximum participation of all students, regardless of their academic or behavioural history. In 2006, for example, students brainstormed topics and then formed four teams – Stormwater, Litter, Water Use and Energy – to address the issue of resource management within our school. **Examples of activities carried out by the Stormwater team include:**

- Liaising with the school groundsman to map out the stormwater drains within the school and to take photos to be used in a display
- Cleaning school drains which were full of leaf litter from the building gutters
- Designing and painting "Clean Seas for Me" signs next to the stormwater drains to emphasize the school's Reef Guardian status and to encourage students not to litter
- Liaising with school principal and Head of Department for the painting of signs
- Writing Thank You letters to the Wondai Shire Council for assisting with guest speakers
- Writing and publishing an action plan

In 2007, Action Science targeted the school's scrap paper usage as the area of investigation. Students put a scrap paper box in every classroom, collected the paper once a week, and weighed it to see how much each class had collected. The paper was then sorted into two piles: paper used on both sides, and paper used on one side. Then the scrap paper was re-used to create useful products such as notepads. Some scrap paper and newspaper were used to make carry bags that students hope to sell. Students also asked students in other classes to consider reducing the amount of paper they used. One Action Science student's comment perhaps says it best, and supports the curriculum model of student-centred action learning:

We believe our project is important because it reduced the amount of waste going into landfill and it increased awareness about the amount of paper waste in the school. It was great to recycle the paper into something that could be used again.

Lessons learned

So far, we have not experienced major problems with our efforts to integrate the sustainability principles of the Earth Charter into our school life. The staff of Wondai State School embraced the four Earth Charter principles as very positive and important values for students to develop in their own lives.

From the beginning, it was stressed to staff that the idea wasn't to work harder and change everything we were already doing. Instead, it was to look for opportunities to incorporate the Earth Charter into the great work already being done in classrooms throughout the school and to use it as an underpinning philosophy for future planning. New Earth Charter and sustainability initiatives are discussed with our administration team first, and then with teachers, to ascertain whether there is enough support from the staff to ensure the initiative's success. Positive support from the school community as a whole is vital to moving forward on our sustainability journey.

Because we have taken a multi-faceted approach students regularly encounter the principles in their daily activities. We also try to reach beyond class and into the community through newsletter articles, notice board signs, and through our school choir. The choir, for example, will be performing a number of environmental songs by recording artist Rosie Emery (co-producer of "The Little Earth Charter")³⁷ at our upcoming school fete.

Our biggest challenge is exploring how to write the Earth Charter into our school plan, which is currently being reviewed. We are particularly interested in using student-centred action-oriented learning approaches to engage learners in the curriculum, as well as to provide improved student outcomes that can be assessed and provide staff with concrete data. For example, we believe that there will be a positive correlation between increased engagement and improved behaviour outcomes in some students. We've found that by encouraging students to develop plans and carry out activities that use the skills they have to offer, the engagement level is extremely high, particularly with

students who do not engage with the curriculum in other areas.

Will we experience spectacular results in the short term from this initiative? We doubt it. However, we consider our sustainability efforts a great work in progress. Every time a student bounces up on the playground and says "I put all my rubbish in the bin," or "I turned off a tap that was left running," or "We are recycling our washing machine water at home," we know we are on the right track and making progress.

Our youngest students are among our most enthusiastic sustainability ambassadors, and as they move through school grades we believe we will achieve greater outcomes. We still struggle with typical school issues, such as litter, but there are students working to overcome these problems, including three environmental action groups which operate on school grounds during students' own free time.

Our vision is that in years to come our entire school community will be operating in a way that respects those with whom we share this Earth, and doesn't impact negatively on their wellbeing and our environment. We hope that we will be producing zero waste by reducing, recycling and reusing, and that the school will be powered by renewable energy. "One hand can make a difference, and many hands can change the world;" we believe we are in the business of teaching many little hands that will make a world of difference!

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³⁷ For more information go to: <http://www.littleearthcharter.org>

Playing and Learning about Sustainability:
**Kids, online media, and the
 Little Earth Charter**



JC Little³⁸ and Alicia Jiménez³⁹

Introduction

From 1 to 8, *The Little Earth Charter*

Earth and Rosie will take you there...

TWO is everything is interconnected,
 for INTERCONNECTED respect and care.

Everyone is different, we all have a place.

The earth is connected to the whole human race...

You know me, Planet Earth!

Life on me comes in so many forms, it's a rich variety of living beings.

They are a big part of my vitality and my beauty!

And absolutely every one of them is interconnected and connected to you!

Selected lyrics from the animated song, "2 is Interconnected!"

³⁸ Little Animation Inc., Canada

³⁹ Earth Charter Centre for Education for Sustainable Development, Costa Rica

The Little Earth Charter (LEC) is a media education experience for children and teachers that promotes the implementation and endorsement of Earth Charter values and principles through online animation, songs, games, storytelling and sharing, with educational and curricular resources for parents and teachers. The LEC offers a modified version of the Earth Charter for children four to eight years old. The eight principles outlined in the LEC are: Life, Interconnected, Family, Past, Earth, Peace, Love and Future. The content is focused on ethical and environmental values – with a strong message of hope – and can be accessed by visiting: www.littleearthcharter.org.

The LEC was created by Little Animation, Inc. (Little Animation), a Canadian company founded by director and producer JC Little, with the support of Canadian musical artist, Rosie Emery. The company is committed to educating children to work towards a sustainable future and their mandate is to provide meaningful, original audio-visual content for children in a variety of media. Little Animation has developed a programme to fulfill this mandate, entitled “Earth to Rosie!” in which the LEC and its eight principles are a significant part. Little Animation shares the Earth Charter mission, “...to establish a sound ethical foundation for the emerging global society” and believes The Little Earth Charter can help establish that sound ethical foundation in young children.

The purpose of the Little Earth Charter is to help parents and teachers convey the Earth Charter’s universally shared principles to children at an early age, with a view to becoming responsible earth stewards shaping a sustainable future. The LEC seeks to reach as many children as possible – all around the globe – which is why they have translated the original English-version of the Little Earth Charter into Spanish, Catalan, French, Portuguese, Dutch and Russian.

The Little Earth Charter as educational tool and plans for further development

The Little Earth Charter offers educators a ‘springboard’ tool to introduce students to a variety of subjects within

the curriculum. Its content relates directly to learning standards and outcomes for students in pre-school to third grade: earth science, physical science, life science, ecology, environmental studies, geography, history, social studies, citizenship education, and values education.

The LEC has distilled and simplified the sixteen principles of the Earth Charter into eight principles for children. The principles are: Life, Interconnected, Family, Past, Earth, Peace, Love, and Future. The plan for the full development of the LEC programme is to have each principle illustrated by a four-minute animated segment with music. **Each segment will have three parts:**

- (1) An audio-visual presentation of the principle and its meaning
- (2) An animated musical sequence set to the corresponding principle/verse in the song “The Little Earth Charter” (which includes a 17-second ‘speech’ about the principle by the animated character, Planet Earth)
- (3) An audience participation pledge to respect and care for the principle

A teacher’s module will provide a detailed explanation of each principle, accompanied by a complimentary classroom activity that demonstrates how to actively apply the principle. This component will be available on the website for free, and may accompany the animation DVD in printed booklet form. Through this comprehensive material Little Animation intends to make the LEC a common point of reference for young, early school-aged children throughout Canada, and beyond.

The project has completed its early development phase, having produced a pilot version of a four-minute audio-visual animation segment entitled “2 is Interconnected!” which refers to the LEC’s second principle, Interconnected. This segment can be viewed online at the LEC’s website.⁴⁰ Little Animation is seeking to secure funding to produce the other seven segments, one for each of the LEC’s remaining principles. The final product will be made available to educators via DVD.

⁴⁰ <http://www.littleanimation4kids.com/LEC.html>

Although the animation part of the programme is as yet not completed, the text-based programme of the Little Earth Charter has extended its roots. It is being used in many classrooms around the world, including in Canada, the US, Portugal, Russia, Belgium, and Australia. In fact, the Little Earth Charter website programme reached over 16,000 visitors from 81 countries in 2006.

Methodological aspects

Using the Little Earth Charter in class

The LEC was designed to integrate effortlessly into a teacher's workload. Moreover, it was specifically created using Multiple Intelligence learning styles to help assist teachers in addressing their students' varying needs and backgrounds – learning styles, cultural differences, emotional dispositions and socio-economic situations.

One interesting characteristic of the LEC – making it attractive for school staff, administrators, as well as teachers – is that the principles touch on every aspect of human life, at every level. In addition to fitting certain principles into the curriculum of social studies and earth sciences, for example, it can be used to deal with many school-related problems such as bullying. The principles can be applied to teaching children about how to resolve conflict nonviolently, how to work together, and how to care for their bodies by eating a healthy diet.

Although the LEC is targeted for children four to eight years old, teachers of students as old as thirteen years



Students carrying out the pledge activity.

have used it successfully in their classes, particularly in Europe. Teachers may be using the LEC in their English language classes, where the English-as-a-second-language appeal is as important a factor as the LEC itself. Some teachers report using the LEC intensively during class time – talking about the principles, expanding on learning through the enriched play activities, and taking the endorsement pledge – and others report on reflecting briefly on the principles in class within the context of other lessons.

Educational activities included in the Little Earth Charter programme

The LEC's activities utilize Multiple Intelligence theory's learning techniques. According to LEC creator JC Little:

Multiple Intelligence techniques have evolved out of the understanding that humans learn and excel in a variety of ways. Therefore it's beneficial to recognize and support children in each of these capacities. The various types of intelligence are described as 'smarts' – picture smart, word smart, body smart, self smart, music smart, number smart, artistic smart and nature smart. The Little Earth Charter addresses many of these types of intelligence by providing visual, aural, manual, narrative, personal and linguistic components to deliver its message.

The following are examples of dynamic, 'smarts'-based LEC programme components and activities used to assist teachers and encourage children to embrace the principles:

The Pledge

The pledge is an interactive component designed to get children physically involved in the commitment to each principle. After learning about the principle, they are invited to 'act out' their commitment by standing up, putting their hand over their heart, and saying the pledge out loud. During trial workshops, children have been eager to participate in the pledge whether they are invited to do so directly by their teacher, or through the animated characters in the video.

Animation

Animation is a powerful tool for educators because it captures children's attention. The two main animated characters, Planet Earth and Little Rosie, were created to appeal to children on an emotional level. "Planet Earth" was created to humanize the earth, give it the expressive attributes of a person, and thereby engage children in caring for it as a living entity. Little Rosie represents the natural curiosity and empowerment of all children. Together, these two characters create the structure of the "Earth to Rosie!" element of the programme. Many teachers have requested the remaining animation clips once they are completed, having seen and/or used the "2 is Interconnected!" clip and other animated features on the website.

Music

Children respond very positively to the LEC song. The chorus is a useful learning-through-repetition feature and kids are able to sing along with the chorus even during the first time they hear the song. The LEC uses music specifically to convey its message, with the assistance of Rosie Emery, a long-time educator of school-aged children. She has a long record of expertise and experience in using the universal and fundamental appeal of music and songs in education.

Enriched Play

The LEC curriculum offers a variety of activities as 'enriched play' as practical ways to enrich and consolidate students' learning by celebrating the principle and applying it in everyday life. The suggested activities include individual and group projects. For example, students can engage in photo projects, putting on an historical play, planting a garden, making peace cards, doing acts of kindness, and raising awareness and funds for endangered species or children in need.

LEC animated slideshow

A slideshow was developed and tested to help educators introduce the LEC to children. It employs an interactive 'call and answer' technique with the

audience, using the animation to support the commentary. The two characters, Planet Earth and Little Rosie, nod and shake their heads as if interacting in the conversation, and children have responded with a high level of empathy and enthusiasm – clapping, cheering, shouting, pointing and laughing. The slide show is approximately fifteen minutes long and focuses on the Earth and our dependence on its resources. This leads naturally to the topic of helping the Earth, and towards the LEC principles. At the end of the presentation, teachers can engage in enriched play activities, and/or watch audio-video segments of any/all of the principles (once they are produced) and encourage students to take the pledge. The animated slideshow was shown in two different situations, a presentation to a large gathering of 400 children (4–12 years old) and to a small group of 25 students (6–8 years old). It was equally effective in each case, getting the children to engage with the subject matter. The slideshow is considered to have great potential helping teachers, and engaging students, and the company is considering how to distribute it more widely.

Results, partnerships and the role of sustainability in the Little Earth Charter

The Little Animation team promotes interaction with end users via e-mail, telephone, in person interviews, website feedback forms and letters of concern or support. They use the information to compile ideas for creating additional animated content for the programme, and to confirm where the LEC teaching modules have been successful. They have received valuable feedback and stories about achievements from teachers, including one educator who showed the "2 is Interconnected!" clip to her class. Directly after the video the whole class went outside to dig the compost in the school garden – and had a fun, physical experience of the principle by examining the worms and small creatures in the soil on which everyone depends for healthy food crops. At Our Lady of the Rosary P-7 School, in Kenmore, Queensland, Australia children and

teachers are also using the LEC. They have uploaded an art show on their website⁴¹ with students' drawings based on the principles of the Little Earth Charter.

"Working Together," is an online project, coordinated by São Monteiro Silva at the Schools of Cacia, in Portugal. It uses the LEC in its work to facilitate the sharing of students' stories, photos, and reports to and from different schools in Portugal, Belgium, Russia, Japan, and Brazil. Throughout the school year, students focus on learning about and taking action on each of the LEC's principles. Each week, students upload their stories, photos, and reports on the website and can share and learn from other students' contributions and see what's happening in other countries. One outstanding example was a group of students who planted a garden to support the principle of "Earth," and tended it to yield vegetables that were cooked into delicious meals shared by teachers and students alike.

During Earth Day 2007, the Schools of Cacia organized a Little Earth Charter/Earth Charter school presentation at the City Hall of Aveiro, Portugal. A wide variety of school and community people attended the event, including students and teachers from other schools, parents, the heads of education and environmental departments for the City of Aveiro, the Association of Environmental Education, and the Portuguese Ministry of Education. The students exhibited their LEC art work and photographs of their LEC activities during the past year and performed the song "2 is Interconnected!"



Students of De Kriebel school, olen, belgium.

The Working Together project facilitators are currently focusing on the principle, "Future," for which the suggested LEC activity is to organize a fundraiser for a good cause. The De Kriebel School in Olen, Belgium has put this principle into action by supporting a little boy named Isuru in Sri Lanka, through an organization called Plan Netherlands. With the help of their teacher, Jef Theys, the students at De Kriebel are creating innovative activities to raise money to help Isuru and his village. One of their fundraisers was a "Used Toy Sale" at the school, an interesting example of both the Little Earth Charter principle of "Future" in action as well as practice good recycling habits.

In addition to promoting and supporting the dissemination and use of the LEC, Little Animation is also putting the principle of sustainability into action through their direct support. In line with their commitment to a sustainable future, the company has invested its financial resources into social enterprise projects that give back to the community. Little Animation intends to divert up to 50% of their profits from the programme towards organizations that support children's education.

Lessons learned

Although the LEC is in the early stages of its development, the production team has observed that children exposed to the programme can recall the Little Earth Charter name and content; it's hoped that this name recognition and basic understanding education of the principles will pave the way for the students continuing to embrace the principles and take what they've learned forward into their secondary education experiences.

Several activities have proven to be especially helpful in addressing sustainability and to make the programme more attractive to students, including:

- Inviting guest speakers from different fields (e.g. farming, energy, transportation, culture, diversity, anti-racism)

⁴¹ http://www.olrkenmore.qld.edu.au/Art/index_art.html

- Encouraging students to get involved with online projects with students in other countries
- Proposing projects that involve performances and public presentations, which allow students to be recognized for having achieved something important and positive in their community – as did one remarkable teacher and his students in Portugal at their City Hall

The LEC provides a simple but effective framework for educators to teach about the Earth Charter principles as well as to educate for sustainability. "We kept it simple on purpose," relayed JC Little, "so it doesn't have to compete with the required curriculum. It integrates easily into a teacher's workload and also complements the mandated curriculum in many subject areas..." JC advises teachers to "...start simple. Take it one principle at a time...go into as much depth as time allows."

The LEC team believes that it is important to present the values and principles of the Earth Charter and for sustainability to children at their earliest stages of learning – to help them grow up understanding these values and thereby bringing about changes in our societies. According to JC and Rosie, the more society emerges with an integrated awareness of these values, the more likely humanity will be able to make choices for sustainability and peacefulness.

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Earth Charter in Delhi Schools: One Earth, One Family

Usha Srinivasan⁴²



Introduction

On the occasion of Earth Day, the Delhi Government, represented by the Honourable Chief Minister of Delhi, Smt. Sheila Dikshit, expressed its commitment to the Earth Charter's vision and launched a collaborative project with CLEAN-India (Community Led Environment Action Network).

CLEAN-India is a programme created by Development Alternatives (a leading Indian NGO and ECI Affiliate) to bring the Earth Charter to over 2,000 schools in Delhi. As part of this effort, the Earth Charter will be integrated into the school curriculum. This case study recapitulates the process that led to the "Earth Charter in Delhi Schools" project, and how it has been implemented.

⁴² Usha Srinivasan is the senior advisor of CLEAN-India (Community Led Environment Action Network) and Development Alternatives.

CLEAN-India evolved from a small group of teachers and students from about 10 schools, with the aim of motivating and empowering children and youth to act as catalysts of change in mobilizing community members to be environmentally responsible citizens. Currently over 60 schools are CLEAN-India members, covering the entire metropolitan area of Delhi and the adjoining cities of Noida and Gurgaon.

In 2005, CLEAN-India adopted the Earth Charter principles and developed a "Children's Earth Charter" version, with the objective of expanding the Charter's reach to our 30 NGO partners, and to thousands of children and teachers from hundreds of schools. The adapted version of the Earth Charter is available in English, Hindi and seven regional languages.⁴³

Our experience using the adapted version of the Earth Charter evolved and then generated the project, "Earth Charter in Delhi Schools," which is in the process of introducing the Earth Charter's principles to approximately 1,700 school in Delhi, in partnership with the Department of Environment and Forests of the Delhi Government. This project presents a potentially powerful opportunity for our young people to understand and analyze local and planetary (global) interconnectedness, and to learn and incorporate into their values the true strength of our country – understanding, appreciating, and caring for our natural and cultural heritage and our commitments towards upholding the respect and dignity of all our people – 'good' globalization and sustainable living.

The "Earth Charter in Delhi Schools" project is being implemented in phases. The first phase is for a period of one year (April 2007 to April 2008) and is planned to be extended in the second phase for two more years (for a total period of three years).

In phase one, we are working with 500 school teachers and are evaluating the programme and making modifications where necessary. We are also working out plans and strategies to take it to children and teachers from schools in the other states, and in the next phase, to reach out to the rest of the schools in Delhi and to other cities.

Methodological aspects

The activities envisioned for "Earth Charter in Delhi Schools" are directed to teachers and children at schools. For teachers, there are five workshops (of two days each) and five field trips planned. For children, there are seven modules that explain and promote reflection on sustainability.

Earth Charter workshops for teachers

The workshops are divided into two days. The first day is intended to sensitize and motivate the teachers to include aspects of sustainability into their teaching. The second day is intended to provide opportunities for teachers to put into practice part of the theory received on the first day, by promoting an experiential learning process.

Day One – sensitizing workshop

The specific objectives of this workshop are to introduce and articulate the principles of the Earth Charter. The group is asked to analyze one local issue and design an intervention for school students, including inputs and actions on the issue. At the end of the day the group draws up an action plan for the whole intervention.

Activities and objectives:

a. Introductory session: An ice-breaker activity, for example:

- Introduce yourself: say your name and share a symbol which represents you or your aspiration (animal, flower, or any living or non-living thing)
- Introduce your neighbour: talk with your neighbour and then introduce him/her to the audience; tell two truths and one lie about your neighbour

b. Expectations: Ask participants to write down what they expect from the workshop on a slip, and then paste the slip on a board.

c. Introduction of the concept of the Earth Charter, using a PowerPoint presentation.

⁴³ To learn more, visit: <http://www.cleanindia.in> and <http://www.devalt.org>.

d. Connection of the Local and the Planetary: The idea is to analyze a local issue to establish the interconnections between the issues at the local and global level. The participants work in groups; they take an idea from the group on a local issue, which they analyze, and then reflect on how it is related to the Earth Charter's principles. Group work is encouraged in order to increase the interaction and exchange of opinions between participants, and to allow them to find answers without relying only on the facilitator.

e. Recap Session with Energizer: Each group will briefly elucidate what issues have been identified. The aim is to check that there are no overlapping issues. Groups may be rearranged based on the issues identified.

f. From thoughts to action: The objective is to design activities pertaining to the issue based on the principles of the Earth Charter and prepare an action plan. Each group will prepare a plan with tangible outputs, and will deal with one issue, working on and integrating all the principles of the Earth Charter. Most of the principles on ecological integrity are being addressed under the CLEAN-India programme and the Eco-clubs programme of the Delhi Government. Some aspects of the Charter's other principles are dealt with in the school curriculum, but only theoretically. The teacher's modules and the students' activities therein will add practical and experiential aspects and make it more meaningful for them – helping make them active participants as well as initiators of change.

g. Presentations by the groups: As a result, one group will be constituted, which will note down the action plans to be compiled as "Delhi Schools Resolution."

Day two: field trip

Each group will undertake one small activity the next day (e.g. a community survey or a street play) to make the field trip into a greater transformative learning experience.

The field visit is related to the topic of the issue analyzed:

- the ecological integrity group could work on a biodiversity count and the land–water relationship
- the social justice group could research the access to health care of the local community
- the democracy/peace group could work on the access to information and decision-making in the community
- the rights for all group could look at overall city patterns and processes

As an example of relevant places to visit, a group dealing with waste management could visit the Asola Bhatti mines (a reclaimed mining site in the process of regeneration) and/or the Balsawa land fill site (one of the land fill sites for Delhi).

Below is a list of suggested places to visit, keeping in mind that they cover broadly all the issues of Delhi.

- Asola Bhatti wildlife sanctuary (reclaimed mining site)
- Yamuna Bio Diversity Park (waste land reclaimed that has a rich diversity of plants, birds, butterflies and insects)
- National History Museum (repository of some of the national historical treasures)
- Crafts Museum (master craftsmen from different parts of the country demonstrating their arts and crafts)
- Indian Parliament in session
- Rehabilitated slum colony (inhabitants of the slums on the banks of River Yamuna)

The field visits are intended to last half a day. After the visit, the groups briefly share their experiences and what they learned. It is also expected that participants provide their inputs to plan the workshops for the school children.

The first set of workshops took place in Asola Bhatti wildlife sanctuary. Teachers participating in the first workshops also had the opportunity to interact with

experts from Bombay Natural History Museum, and engaged in several activities related to the various nature trails. The teachers also interacted with forest officials and the users (for firewood and fodder) of the forest from the surrounding villages.

Activities for children – Earth Charter Modules

Seven modules – three modules on the Earth Charter's principles and one each on biodiversity, trees, medicinal herbs, and solid waste management – are being distributed to 1,700 schools. These modules have been prepared by the CLEAN-India programme team, with input and contributions from youth from colleges in Delhi, and are serving as aid materials for teachers. A set of posters on the Earth Charter principles are also being prepared and will be used for awareness generation. Activities for generating awareness – street theatre, rallies, competitions, and exhibitions – will also be undertaken.

The following are three examples of student assignments and activities that could be carried out as part of the modules.

1. Social and Economic Justice

To address principle 11 of the Earth Charter: "Affirm gender equality and equity as prerequisites to sustainable development and ensure universal access to education, health care and economic opportunity," children would understand the complex issues of gender equality and how inequality afflicts our society, by means of discussions and interactions. Different thought-provoking questions and exercises are used to promote critical thinking regarding gender equality, hoping that these will inspire students to proactively take small measures for ensuring equality for men and women.

Examples of exercises and questions:

1. How many among us admire a woman?
2. Are women given their due respect in your family?

3. Write down the different roles played by women in your family.
4. Create a club or group to discuss the daily violence and abuse that you or others you know are witnessing, and share what you might be able to do to improve the situation.
5. Pledge that you will not ask (or pay for) a dowry.
6. Do you feel that this problem can ultimately be addressed (solved) through literacy? Actions might include students helping educate more disadvantaged children.

2. Democracy, Nonviolence and Peace

The "Electoral Process" is an activity to reflect on the Earth Charter principle 13: "Strengthen democratic institutions at all levels, and provide transparency and accountability in governance, inclusive participation in decision making and access to justice."

The Electoral Process activity:

List all the different election-related activities and arrange them in a time sequence, beginning with the first activity and ending with the last. Some of these activities are: releasing election manifestos; counting of votes; making a voters' list; election campaigning; declaring election results; casting of votes; ordering a re-poll; announcing election schedule; filing nomination.

Start an electoral process in your school (or in class) following some or all of the activities listed above.

Indians always feel proud of the fact that we are part of the biggest democracy in the world, but do we actually understand the democratic process? How are our representatives elected? Carrying out this activity will involve holding an election in the school and covering all the activities related to an election process. This exercise will help our youth to understand the election process; to be a

part of the whole system, and to encourage them to actually cast their votes when elections are held in their city.

3. Ecological Integrity

To reflect on Principle 5: "Protect and restore the integrity of Earth's ecological systems, with special concern for biological diversity and the natural processes that sustain life," it has been useful to undertake field trips to sacred groves, and get children involved in activities related to these special places.

'Sacred groves' (patches of forest dedicated to local deities) are unique and distributed all over India. There are about 17,000 known sacred groves that have survived the axe of development, political turmoil and natural calamities, due in part to conservation ethics coupled with taboos and traditions. Hence, in the present context, 'sacred groves' are not merely a patch of forest, but are islands of life in desolated landscapes. They represent the past status of vegetation and biota, as well as a biotic diversity of the region.

However, the number of groves is declining as social values and religious beliefs are changing due to modernization, urbanization and the expansion of the market economy. Habitat destruction is on rise in these once socially-guarded ecosystems.

To deal with this issue, the "Earth Charter in Delhi Schools" project promotes the activity: "Adopt a heritage tree." The idea is that students adopt a heritage tree, located in a nearby sacred grove. First, the students are asked to improve their knowledge about the heritage tree by collecting information from various sources, so they learn about its religious, social and environmental significance. Second, they compile their findings into a poster, pamphlet and/or booklet and distribute them to visitors; they could also put up informational signage with permission from the authorities.

The teachers can even encourage students to initiate an awareness campaign in the area to make local people aware of the significance of their heritage tree and, in this sense, promote positive values within the students about their place in their communities and in the wider world.

Actions and results from the children's workshops

We have launched three large-scale activities in Delhi, including the Green Million, waste recycling, and Celebrating River Yamuna.

1. Green Million – A million native trees are being planted across Delhi by school children over three years.
2. Waste paper recycling saves trees, thus saving the carbon sinks and reducing pollution, and also saves water and energy. Children are also making paper using the recycling plants set up in their schools. Seventy-five schools will be part of this programme.
3. Celebrating River Yamuna – the Yamuna River is the life-line for Delhi. It is highly polluted mainly due to the untreated sewage from homes and effluents from small industries. **Celebrating River Yamuna was launched on Earth Day 2007 and included these activities:**

- The students monitored the water quality, help in the cleaning up of some stretches of the river, and spread awareness about it in their schools and communities.
- The students spoke to the priest of one of the temples on the riverbank (Ram Ghat, a place where devotees perform religious rites and immerse flowers and other 'Pooja' materials in the river). They talked about the increase in the levels of pollution in the river due to certain religious practices. Now the temple displays a board of "Do's and Don'ts" for the devotees. A cement tank is now available for the collection of flowers, and other such materials for composting, and the priest has been successful in keeping the stretch near Ram Ghat clean.

Lessons learned

This project is still in the process of being implemented; nonetheless it has achieved important political support

from high government officials in Delhi. Having this support helps the project bring about changes in the education system by encouraging the discussion of social, economic and ecological aspects of local situations in schools in an integrated way.

This support is the result of various factors. One factor is that Development Alternatives has been interacting with all stakeholders including the State and Central Governments. The activities of this organization have attracted the attention of both the political leadership and the administration. The Honourable Chief Minister has been taking a keen interest in the activities and has also participated in some of them.

Another factor is that the CLEAN-India programme has been working in Delhi schools for over a decade on various environmental issues, and is involved in projects and programmes of the Delhi Government (formulation of school Environmental Science curriculum and books; teachers' trainings; 'Bhagidari' programmes; awareness programmes; and exhibitions). Some of the CLEAN-India initiatives have influenced government policies, such as the formulation of "Greening" guidelines and a tree help line; the banning of polythene bags; and the use of natural and eco-friendly products for celebrating festivals (such as eco-friendly Holi and Diwali without firecrackers).

The capital city of Delhi has led the way for other state governments to follow with many of its initiatives. Delhi is growing at a very fast rate and many in society are facing numerous social, economic and ecological problems. We felt, therefore, that it was the right time to initiate "The Earth Charter in Delhi Schools."

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Butterflies and being kind:
**An elementary school
embraces the Earth Charter**

Kimberly Corrigan⁴⁴



Introduction

At the start of the year everyone at school will come together and we'll ask ourselves "How do we want to enhance our commitment to the Earth Charter?" We have a million ideas! And by using all the Earth Charter's principles we'll have topics for the next sixteen years...

Renee Kok, Head of School

⁴⁴ Education programme advocate, YES! Magazine, Bainbridge Island, Washington, USA.

The students and staff at Voyager Montessori Elementary School are living the Earth Charter's principles inside and outside the classroom by working together to create a peaceful, healthy, ecologically diverse, and sustainable environment on their 3.5-acre campus in Washington State. The school officially endorsed the Earth Charter on Earth Day 2007 in a day-long celebration with staff, students, and parents after spending the academic year engaged in projects guided by the Charter's principles.

Voyager Montessori Elementary School (Voyager) has capacity for 44 students in kindergarten through sixth grade (K–6), and six staff members: four teachers and two administrators. The school follows the Montessori Curriculum, designed to “educate the child for life” by providing children with the tools to be independent learners, build self-esteem in a safe environment, develop social skills, find peaceful resolutions to conflict, understand the democratic process, honour individuality and diversity, and instil respect and responsibility for the earth and all living things. These goals are complementary to the Earth Charter's major principles of respect and care for the community of life, ecological integrity, social and economic justice, and democracy, nonviolence, and peace.

The staff of Voyager were introduced to the Earth Charter when they attended a workshop entitled, “The Earth Charter: Local and Global Connections for Earth Day” held for 70 K–12 educators in March 2006. The programme was co-presented and sponsored by YES!



Children learning about waste management.

Magazine,⁴⁵ Facing the Future: People and the Planet,⁴⁶ and the World Affairs Council.⁴⁷

YES! Magazine and its partners have offered two such workshops on the Earth Charter for K–12 educators (one in 2006 and one in 2007). Workshops lasted three to four hours and provided teachers with an overview of the Earth Charter's history and principles; a copy of “The YES! Earth Charter Reader + Guide” (see Box 3); hands-on practice using Facing the Future lesson plans; and a PowerPoint presentation on global climate change with an extended question-and-answer session with an international expert on carbon issues from the University of Washington.⁴⁸

After attending the workshop, the staff decided to incorporate the Earth Charter's principles in their school by adapting the materials in “The YES! Earth Charter Reader + Guide” and by adapting the Earth Scouts' version of the Charter's principles: (1) play fair and learn to share, (2) love nature and clean up your mess, (3) everybody matters so be kind to others, and (4) always shake hands and make up, everyone deserves to be heard.⁴⁹

Voyager's staff also saw Al Gore's movie, “An Inconvenient Truth,” and felt increased urgency to address environmental issues, yet in a manner appropriate for their young students. According to the Head of School, “We wanted to inform the kids about the issues, but not scare them or leave them feeling threatened.” So they created projects focused on positive solutions to problems, and on taking action within a community that the students could control—their school.

⁴⁵ YES! Magazine is an advertising-free quarterly in print and online at: <http://www.yesmagazine.org>. YES! is published by the Positive Futures Network, an independent nonprofit organization. YES! offers stories about solutions and resources to support people in building a just and sustainable world.

⁴⁶ Learn more about Facing the Future: People and the Planet, at: <http://www.facingthefuture.org>. Facing the Future offers lessons and resources for teaching about sustainability.

⁴⁷ Learn more about The World Affairs Council at: <http://www.world-affairs.org>. The World Affairs Council is a membership-based organization that creates forums for discussion of critical world issues.

⁴⁸ Dr. Richard Gammon is a Professor of Chemistry, Professor of Oceanography, and an Adjunct Professor of Atmospheric Sciences at the University of Washington in Seattle, Washington, USA.

⁴⁹ Learn more about the Earth Scouts at: <http://www.earthscouts.org>.

Box 3: *The YES! Earth Charter Reader + Guide ~ bringing the Charter to life*

The YES! Earth Charter Reader + Guide is designed to introduce teachers and students to the Earth Charter through inspiring, positive, solution-oriented stories about people, in the US and around the globe, who are creating a more just, sustainable, and peaceful world. Stories highlight youth as leaders and impart the message that young people are making a real difference in shaping a better future for all. **The 60-page guide includes:**

- The full text of the Earth Charter
- One YES! Magazine story about how the Earth Charter was created, written by Jan Roberts, director of Earth Charter US, Earth Charter Communities Initiative, and Earth Scouts
- Four stories from YES! Magazine (www.yesmagazine.org), each one paired with a major principle from the Earth Charter
- Four standards-based lesson plans with resources from curricular experts, Facing the Future: People and the Planet (www.facingthefuture.org), each one paired with a major principle from the Earth Charter
- An annotated resource guide and service-learning reference section
- An example of a YES! story paired with an Earth Charter principle

The Earth Charter principle 'Ecological integrity' is brought to life through the YES! story, "Bringing biodiesel from Colorado to Colombia," which tells the story of a group of university students who powered their schools' buses with biodiesel from recycled cooking oil. Their learning journey goes global when they accept an invitation to go to Gaviotas, Colombia and participate in a local biodiesel refinery project. They also learn about the social and economic impact of environmental work, and the need to serve a community's broader needs.

To learn more about how YES! Magazine promotes the Earth Charter through the "Earth Charter Curricular Module" online, visit <http://www.yesmagazine.org> and click on "Education Connection." The YES! website offers free access to thousands of stories, special web-only content and practical resources for getting involved. View stories in Spanish by visiting "YES! Online: En Español" on the YES! homepage.

Methodology and activities of Voyager elementary school

The Montessori philosophy of education fits with the UNESCO vision for educating in support of the Decade of Education for Sustainable Development (DESD) with methods that are constructive and participatory; approaches to new material that are integrative and multi-disciplinary; and hands-on activities that are context specific and action-oriented.



Learning different skills.

Voyager organizes their kindergarten–6th grade learners into two multi-age classes, juniors and seniors. The teachers are experts in instruction and subject matter, and approach teaching through facilitation and encouragement, nurturing their students' natural curiosity and joy of learning.

Teachers already had a full curriculum planned, so rather than creating a separate programme to introduce the Earth Charter, they looked for ways to include the principles within their established "all-school curriculum" – weekly activities that all grades participate in together, such as gardening, reading, and art. The Head of School did not create extra requirements for teachers and tried to fold discussions about projects into existing staff meetings. They looked for meaningful and collaborative activities that embodied the Charter's principles while also supporting their school's goals. They continually solicited student ideas, and by assessing together what they were learning and why it mattered, students were constantly shaping the curriculum.

The "all-school curriculum" programme offered several hours a week for lessons and activities. Experts from the community were invited to the school to help staff and students gain specific knowledge and to learn new skills. For example, they taught staff and students how to make 'bokashi' (bran, molasses, and microbes mixed with food waste to create compost), how to build a garden and enrich soil, as well as how to choose the appropriate flowers and plants to attract an endangered butterfly to their garden. They also learned how to build two raised strawberry beds and then care for the soil and the berry plants, as well as how to raising butterflies and bees and create places for them to thrive on campus.

These activities developed organically from the discussions at the beginning of the year, when students envisioned and described 'a perfect world.' After creating a list that included everything from "more trees and less pollution," to "no war and more teddy bear hamsters," students spent the school year bringing their vision to life. Guided by the values of loving nature, helping people, and being peaceful, **the students engaged in the following activities:**

- Recycling paper, plastics, and glass
- Using less water
- Composting their food waste
- Building bee boxes and incubating an endangered butterfly species
- Planting a garden to 'invite pollinators' into their ecosystem
- Constructing two strawberry beds to honour the historical farmers of the school's land
- Supporting local artists by showcasing their work and then making recycled gifts (shopping bags, greetings cards, flower seed and dried herb packets, lavender sachets)
- Writing and presenting poetry about peace with each other, their parents, and elders in their community
- Drawing and sending handmade peace cards to one school in each of the 50 states to serve their wider 'circle of kindness'
- Sending vegetable seed packets to a village in Ethiopia

In their own way, students learned that the Earth Charter's principles of ecological integrity, social and economic justice, and peace were interconnected. For example, when the students wanted to act on their vision of a perfect world by creating less waste, they collected their garbage for 24 hours, analyzed it, and determined it was mostly food scraps. So they composted the food waste and used it to enrich soil in the schoolyard.

Meanwhile, students were learning about the history of the school's property and found it had been a strawberry farm owned by a Japanese-American family. During WWII, after the bombing of Pearl Harbor, Americans of Japanese descent were sent to internment camps and Bainbridge Island was the first place to evacuate its residents. To honour the historical use of their land and the Japanese American farmers who once worked there, staff and students built two large, raised garden beds and grew the same Marshall Strawberry that had been grown there before. They reached out to the Bainbridge Historical Society for assistance in

locating the unique berry plants, and after caring for them for many months they harvested the berries and offered them as a 'thank you' to the people who volunteered with the school.

Lessons learned and plans for the future

Teachers chose not to introduce the Earth Charter to students as 'a document to study.' Instead, they asked their students to go through the same process as those who originally created the Earth Charter – envision a better world and identify the values and principles it would take to create it. Voyager students then spent the school year taking conscious actions based on their own values and principles.

At the end of the year the students examined the text of the Earth Charter, and found their own values embedded throughout. They understood that their projects—composting food waste, making gifts from recycled materials, building gardens, raising butterflies and bees, supporting local artists, and creating peace poetry to share with others—were vibrant examples of the Charter's principles in action. After a year of living the principles of the Earth Charter at school, and often at home as well, the students and staff knew they could endorse it with integrity, purpose and a sense of accomplishment.

The programme resulted in many valuable outcomes. Students felt more involved and responsible for the care of the school environment and for each other. The relationship between the school and the local community was deepened. Parents received regular updates about school activities and reported to the Head of School that they felt better able to initiate relevant and meaningful conversations with their kids about what was happening at school. Further, parents supported the Earth Charter-inspired projects by participating in the school's Earth Charter endorsement celebration on Earth Day 2007.

Going forward, the Earth Charter will be the permanent educational framework for Voyager's yearly "all-school curriculum." They will maintain their existing projects, such as composting, and tending the butterfly garden, bees and strawberry beds, and will also undertake new projects as they explore the Charter's different principles.

This year Voyager acted to create 'a perfect world' at their school. Next year the Earth Charter will again guide Voyager as they explore their 'unique island home.' They will study the geology, culture, history, and geography of the island and explore ways to meet their basic needs—food and clothing—through local resources. They may also reach across the globe to find other schools trying to meet their needs within their local communities.

Voyager is passionate about keeping the Earth Charter's vision and principles alive, inside and outside the classroom. "We were all transformed by the experience," said Renee Kok, Head of School, "perhaps the teachers most of all. We were totally inspired by the kids. It felt so good to be working together towards something important. We gave kids tools to make decisions for tomorrow—which is our job—because it is their future."

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Values for a sustainable future:
**The Earth Charter and
 educational curriculum
 in Romania**

Gabriela Scarlat and Constanta Poede⁵⁰



Introduction

The processes of European integration reflected in “The Lisbon Strategy” and “The EU Strategy on Sustainable Development” helped the Romanian government set its priorities in defining national strategic objectives for European integration. As part of the integration effort, Romania approved the United Nations Economic Commission for Europe’s (UNECE) strategy for Education for Sustainable Development (ESD) and actively joined the United Nations Decade for ESD.

As a result of a broad political and socio-economic transformation, the Romanian educational system has undergone a dramatic shift towards European integration and mature forms of democracy. These changes are bringing about new opportunities, as well as increasing the need for education initiatives and projects, with the view to making education for sustainability part of the formal learning experience of Romanian school children.

⁵⁰ Ms. Gabriela Scarlat is a General Inspector of the Department of Pre-university Education of the Ministry of Education and Research of Romania.
 Ms. Constanta Poede is a Deputy Head Teacher of School N.13 “Stefan cel Mare” in Gelati, Romania.

Methods and activities

In mid-2006, Dr. Mihail Hardau, the Romanian Minister of Education and Research, asked his staff to develop a broad action plan for integrating Earth Charter principles into the school-based curriculum, through new content, objectives and criteria for student proficiency. The main principles of sustainable development as expressed in the Earth Charter had already been reflected in the national core curriculum. These efforts were documented in the national report at the 2nd Meeting of the Steering Committee on ESD in December 2006 in Geneva.

Among the measures planned and taken to promote ESD through formal and non-formal learning in Romania, the Ministry of Education included the "...Promotion of the Earth Charter as an educational instrument/material to be used in pre-university education, through posting the Earth Charter on the ministry website (<http://www.edu.ro>); recommending that county school inspectorates and schools develop school-based curriculum on the Earth Charter; and to organize extracurricular activities at the county and school level, based on the Earth Charter's principles."⁵¹

By the start of the 2006–2007 school year in Romania, the Department of Pre-University (primary and secondary) Education had integrated the Earth Charter in subjects included in the core curriculum, vocational training modules, and general school-based curriculum:

- **Core curriculum:** Technological Education, Biology, Sciences, Civic Education, Entrepreneurship, Economy, Applied Economy, Sociology, Philosophy, Social Studies, Geography and Ecology
- **Vocational Training Modules:** Preventing and fighting pollution, Preserving biodiversity, Waste management, Regeneration of trees, Sustainable tourism, and Standards of sustainable development, among others
- **School-based curriculum:** Health Education, Biology, Arts

Activities at the ministerial level

The project started during preparation for the 2006–2007 school year. The Ministry made ESD materials available that had been sent by the Earth Charter Centre for Education for Sustainable Development by posting them on its website and by presenting them to county school inspectors and the heads of schools. The Ministry offered funding for school contests related to subjects in which the Earth Charter principles were reflected. Four types of contests were organized at the local, county and national levels: **interdisciplinary** ("Earth Sciences"); **civic** ("Democracy and Tolerance," as based on student portfolios); "Little Ambassadors for the Environment;" and ecology ("SOS Nature").

Activities at the school level ~ case of No. 13 Stefan cel Mare secondary school

The experience of No. 13 Stefan cel Mare secondary school (Stefan cel Mare) is a concrete example of the adaptation of ministerial plans for the integration of the Earth Charter framework for ESD. This Romanian school, like many others, designed its own project to apply sustainable development principles and values in its teaching process and in students' interaction with parents, partners and the local community.

The school is located in the city of Galati, one of the five largest cities in Romania, and is located on the banks of the Danube River, with its unique natural habitat for flora and fauna. Stefan cel Mare is a large, modern school located in one of the central districts of the city with 850 pupils and 36 classes (17 primary and 19 mid-secondary classes). The school also employs 50 teachers, most of them holding the highest national didactic degrees.

The teachers are very enthusiastic and open to local, national and international initiatives, particularly in such areas as the environment, responsible consumption, education through extracurricular activities, life-long education and skills, foreign languages, and education for democracy and peace. The pedagogical team

⁵¹ This statement is part of the official Minutes of the 2nd Meeting of the UNECE Steering Committee on ESD (Geneva, 4-5 December 2006).

reported finding all of the above-mentioned areas addressed by the Earth Charter document and its principles. The school deputy headmistress and English language teacher, Constanta Puede, together with her colleagues, decided to endorse the Earth Charter and apply its principles in their school and in the local community.

“The Way Forward:” Project Description

The Earth Charter school project is entitled: “The Way Forward – The Choice is Ours: Educational Programme for Extracurricular Activities in Sustaining Earth Charter Principles.” A motivated group of teachers set up a School Development Plan that defined the goals, means and methods to educate students on the principles of sustainability; to promote democracy, tolerance, equal opportunities, cooperation and integration into the world’s community; and towards shaping a world based on respect for nature and universal human rights. During the course of the project, students were expected to develop the following skills and values:

- Become responsible to one another, the greater community of life and future generations
- Take care of life with understanding, compassion and love
- Act with moderation and efficiency when using energy
- Protect local sites of spiritual and cultural significance
- Develop students’ democratic spirit
- Identify solutions to prevent harming the environment through inappropriate waste management and garbage pollution
- Develop the capacity of self-organization and team-building spirit
- Support the local community in decision-making processes and
- Recognize the importance of moral and spiritual education for a sustainable life.

“The Way Forward:” Project time frame, target group, and partners

School staff had prior experience in looking for innovative ways to promote sustainable education and integrate its methods in various areas and subjects. It

was clear that the Earth Charter framework could help them to further incorporate the integrated vision of sustainability into formal educational programmes, extracurricular activities and relations with parents and the local community. The time frame of the project was set from October 2006 to December 2007. Participants included 300 primary school pupils, 250 lower-secondary school pupils, 14 primary school teachers, as well as teachers of English, Biology, Art, Geography, Religion and Civic Education. Art teachers helped students set up exhibitions, performances, musicals, and recitals with Earth Charter themes. A group of enthusiastic young primary school educators were also inspired by the Earth Charter and assumed a very active role in this endeavour.

It is important to mention that the Pupils’ Council, a democratic student governance group comprising 60 pupils, made essential contributions to the decision-making processes and implementation of the project, in co-operation with the School Board. The school educational counsellor and the school psychologist were involved in all project activities, and the project reached a further 400 parents and many neighbours of the students. In the wider community, the local parish priest and congregation of the church, Inaltarea Domnului, were also actively involved. Local organizations and NGOs that signed partnership agreements with the school included: the local branch of Friends of the Earth, the Ecological Consulting Centre, the Natural Science Museum, the NGO “Save the Children,” and the local branches of the Anti-Drugs Association, the Echi-Gal Foundation and the Environmental Protection Agency.

“The Way Forward:” Methodology and activities

The project was designed as a series of interconnected mini-projects, each reflecting one of the Earth Charter principles. The four mini-projects are described below.

1) The Green School (Green 13)

Green 13 educational activities were carried out as part of the nation-wide programme, Eco-School. The project was inspired by Earth Charter principle 7(a): “Reduce, reuse, and recycle the materials used in production and

consumption systems, and ensure that residual waste can be assimilated by ecological systems.”

From January - October 2007, 60 pupils from grades 3 to 7 set up a Green Volunteers Group and designed an eco-code of behaviour based on the second Earth Charter principle and its sub-principles. The Green Volunteers Group, with help from 36 teachers, set up a monthly collection of paper-waste to sort and sell to the local waste processing plant. With the motto “Nothing to be thrown out, everything can be recycled!,” more than 200 students, alongside their parents and neighbours, became involved, and donated their earnings to the Green Volunteer Group for the tools, materials and literature necessary for future activities.

This group also organized and led a Spring Carnival on April 22, 2007, with a parade of costumes made from recyclable materials being showcased in the school gymnasium. Seventeen primary school teachers helped with costume design, background music and parade logistics. It was on a bright spring day that 100 of the youngest students from grades 1–4 celebrated Earth Day with friends and family in beautiful – and often funny – costumes.

Another part of the mini-project was named “Funny Recycling,” under the leadership of ‘funny teachers’ from “The Fun Science Club” – a group of enthusiastic primary teachers who stimulate their students’ hunger for knowledge by making theatrical educational presentations for students. The Fun Science Club is

becoming very popular, attracting many new members. The local branch of the National Foundation for the Environment was also a partner in this activity.

2) Energy Is Our Future

This mini-project is based on Earth Charter principle 7(b): “Act with restraint and efficiency when using energy and rely increasingly on renewable energy sources such as solar and wind.”

Since November 2006, 60 members of the Green Volunteers Group, assisted by their science teachers, have held a series of workshops for the rest of the school under the general titles: “What energy is” and “Climate change effects.” The participating primary and secondary teachers developed materials to assist them in integrating sustainable energy issues across school disciplines, both inside and outside the school environment.

Teachers helped the students to prepare materials and visual aids in order to demonstrate sustainable and unsustainable energy production and consumption. After the completion of student reports and presentations – carried out during lessons on physics, chemistry and biology –several working groups formed to continue the lively discussions in an informal learning environment. Partners of the project, such as the local branch of Friends of the Earth, have attended these presentations to share the latest scientific information with participants; they have also helped to prepare senior students for future roles as community trainers. This mini-project will continue through 2007.



Mini project “Funny Recycling”: 3th graders make theatrical educational presentations.



Mini project -Energy is our future-. 4th graders

In October 2007, as a complimentary mini-project, the ten winners of the school contest participated in an online competition to design posters and slogans on how to enhance the effectiveness of energy conservation activities. The online competition, organized by the web-based international project "Energy is our Future," is focused on supporting energy education across school curricula and helping teachers to raise students' awareness of conserving energy, understanding energy consumption, and advocating the importance of renewable energy. The project also aims to inspire students to influence their own and others' behaviours and lifestyles. This online project is also part of web-based European School Net, sponsored by the European Commission to advance the European integration process (<http://www.eun.org>).

3) We Protect and Preserve the Environment

The second pillar of the Earth Charter ("Ecological Integrity") and its principles, have inspired several mini-projects for the school's younger students (grades 1–3). Principle 5 has particularly served as a source of inspiration: "Protect and restore the integrity of Earth's ecological systems, with special concern for biological diversity and the natural processes that sustain life."

In November 2006, primary school teachers and students in biology (along with many of their parents) undertook a study trip to the Focul Viu mountain ridge in Vrancea County to learn about the flora and fauna. Applying Earth Charter principle 5, students then gave presentations on the endangered bird species and animals of that natural habitat, and arranged a photo exhibition to be shown at the school to parents, partners and residents of the school's neighbourhood.

Inspired by this experience, the students soon after launched a mini-campaign, "The Danube: The River next to us," and invited a local partner, the Ecological Consulting Centre, to join in the initiative. The children cleaned the riverbanks and took photos to illustrate their efforts and the waste and pollution in the Danube, and added these to their permanent photo exhibition. Teachers have used this experience to organize other activities, such as designing an ecological file for each pupil and for the whole class, arranging exhibitions of

posters and essays on ecological themes, and making stuffed animals from recyclable materials during lessons for handcrafts and recreation.

4) The social component ~ projects on education, health, and human rights

The social component of the Earth Charter, as reflected in the fourth pillar "Democracy, Nonviolence and Peace," initiated many educational activities and events. Particularly inspiring were principles 14: "Integrate into formal education and life-long learning the knowledge, values and skills needed for sustainable development;" 14a: "Provide all, especially children and youth, with educational opportunities that empower them to contribute actively to sustainable development;" and 14d: "Recognize the importance of moral and spiritual education for sustainable living."

The need to educate students to become socially responsible citizens motivated the Pupils' Council and teachers to invite representatives of a local Anti-Drug Agency and other community members to participate in the project. Activities included a thematic cartoon exhibition of the most common and dangerous drugs, a discussion of a film about youth and drugs, and a question-and-answer session with the school psychologist and doctor. This activity was later followed by a school role-play, "We, the Children, Have Rights, Too: Respect Them!" The play was written and staged by students after their enrolment in a series of social studies lessons, and this was followed by a debate session in the education resource hall. Partners in this mini-project included parents, neighbours and members of the local branch of Save the Children.

Another ongoing mini-project, "I can help, too!" was carried out from October 2006 to October 2007, by teachers, students, parents and the congregation of the local Catholic church, Inaltarea Domnului. The students, along with their parents and teachers, identified old, infirmed and lonely people in their community and took turns caring for their needs. This helped them to recognize the importance of moral and spiritual life, and taught them that compassion is an integral part of truly sustainable living.

“The Way Forward:” Evaluation of the school project

The impact of the Earth Charter school project “The Way Forward –The Choice is Ours: Educational Programme for ExtraCurricular Activities in Sustaining Earth Charter Principles” was assessed through a questionnaire and a series of interviews with all stakeholders, including students, teachers, parents and other partners. It collected information on school curriculum development, particularly in view of the change in teaching style, student involvement and democratic approaches to learning. The most successful examples of teaching methods and student initiatives were documented for developing new educational strategies, as were the outcomes of each activity (such as tables and graphics depicting the amount of waste paper collected by each class). Class winners were awarded diplomas and presents, and articles were published in the school magazine and in local newspapers. A final report was presented during the Conference on Dissemination and Evaluation on October 5, 2007 – Education Day in Romania.

At a first glance, it might seem that the changes are not profound – just a tidier schoolyard and participation in contests. But that is just the first glance. Since the launch of the project, the students and teachers of Stefan cel Mare have demonstrated increased motivation and academic results, strong partnerships with local NGOs and other community stakeholders participating in the mini-projects and other school initiatives, and a growing awareness of (and involvement in) energy, water and waste issues.

Moreover, the school has seen other important outcomes, such as more parent-student involvement and better teacher-student relations based on teamwork, cooperation and active participation in school activities. In addition, students are taking concrete actions for a better future. They have decided to use the Earth Charter as the framework for designing their own “Code of Environmental Behaviour,” which will be introduced by the Student Council. In summary, students have become actively involved in school and community life, and are demonstrating the attitudes and behaviours of truly concerned citizens.

The participants and partners in this project have learned to think and act as “a little part of the global community” and to feel a sense of interdependence and shared responsibility for the wellbeing of the human family and the larger living world.

Lessons learned and future plans

In Romania, it is clearly understood that education for sustainable development is a process through which teachers and students learn about the concept of the common good, and learn how to become citizens who actively contribute to social and environmental changes through cooperation and respect. The case study of the projects carried out by the Stefan cel Mare school is just one of many examples of Romanian schools integrating the Earth Charter into their educational curriculum and extracurricular activities. These activities provide students with avenues to demonstrate that sustainable development can be achieved through exercising social and political rights. These experiences also help students to develop critical thinking skills, and encourage them and their teachers, parents, and community members to engage in participatory, hands-on, integrated actions towards living in a more sustainable way.

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HIGHER EDUCATION



Experimenting with the Earth Charter:
**Activities of the Faculty of
Educational Sciences**

Alfonso Fernández Herrería and José Luis Conde⁵²

Introduction

The Faculty of Educational Sciences at the University of Granada has undertaken a series of experimental activities based on the Earth Charter with students from different educational programmes. These activities are in response to a commitment amongst most members of this faculty to gradually incorporate the Earth Charter principles within the entire university community.

The Faculty Board's decision to endorse the Earth Charter in 2006 was a testament to this commitment. The document was presented before the student population in a public ceremony, presided by the Dean, D. Francisco Fernández Palomares.



⁵² Professors, University of Granada, Spain.

Many of the activities developed by the faculty have been inspired by the principles contained in the Earth Charter. One of the main activities has been the creation of an interdepartmental Earth Charter research and development group. In this case study, however, only three experiences developed with graduate students in Child Education will be described in depth. We will also describe an activity in Sensorial Conscience, carried out in two subjects: Philosophy in Education and Education for Peace.

Experiences in a Graduate Course of Child Education

The following are three experiences undertaken by two groups of students in their second year of the Graduate Course of Child Education. These took place during the 2006 and 2007 academic terms, and were promoted by Professor José Luis Conde. Participating students, between 18-21 years of age, were encouraged by Professor Conde to use art in various forms, such as corporal expression, plays, and magic, to express the Earth Charter principles. The aim was to sensitize other people, especially those participating in the educational activities described below.

1. Earth Charter Diary

The objective of this activity was to familiarize students about the notion of sustainability within the Earth Charter and its principles, and to outline the ways and advantages of implementing these. This experience involved a total of 200 students directly and, indirectly, their circle of relatives, friends and acquaintances were also included. The impact has been an increased awareness about the holistic framework offered by the Earth Charter, but, above all, the possibilities for its application.

Methodological Aspects

The first activity was to provide students with a comprehensive overview of the sustainability notion and the Earth Charter principles. This was achieved through a PowerPoint presentation including photographs for

each principle that had been selected during a weekly seminar of the group "Teaching Together."

Once the students were briefed on the Earth Charter principles, they were asked to write a journal entry, over the course of one academic term, which defines each principle. The students were then asked to initiate activities in their daily lives that could be seen from the perspective of 'human dignity.' Each student would have to record these actions in their personal diary, and then match it to one or more principles that they had written about. Later, they could reflect on the reasons why these actions were matched to each principle and, most of all, what impact this had on the persons involved in the action, and on the students themselves.

After carrying out this project, we were able to ascertain that the students were positively affected by the Earth Charter principles. The students adopted habits that reflected the core values of the document, and most students continue to record their activities in the daily journal.

Another aspect we would like to mention is the fact that when a student carries out any action, not only is he/she affected, but others also automatically become familiar with the actions and subsequently become inspired – producing a domino effect that exponentially multiplies the number of people committed to achieving changes in conscience. This can be seen as bringing about a more sustainable future and a positive transformation of society.

The following are excerpts from student diaries that portray the impact of the experience.

Next to my house there is a home for the elderly, which I used to visit every once in a while. The other day, I walked past the door thinking that I had to visit them soon, so today I made up my mind and called a friend, and we have visited the home. –

Eva Maria Burgos

There was a small two- or three-week-old kitten. It looked at me with that cute little face... it was a

*feeling... almost indescribable. My partner and I looked at each other and decided to adopt her. –
Mónica González*

*In my house, instead of throwing away the used up cooking oil into the kitchen sink or in the trash, we are collecting it in large containers to take them to my grandmother so that she may recycle it and make soap, which we believe also saves us money when buying detergents. –
Marta Arellano*

*When I go shopping, I don't use plastic bags any more, but instead I carry my own shopping bag. –
María Pérez*

Lessons learned

After this experience, in addition to becoming familiar with the Earth Charter principles, the students were trained to play a leading role in bringing about change in their immediate surroundings. This is testament to the fact that through their actions, these students can be influential in the transformation of society. The positive effects generated by this experience serve as an inspiration to replicate this practice (writing a diary of the Earth Charter principles) to other faculties within university settings, and even to primary schools and high schools in Granada; and, if possible, throughout the Spanish territory.

2 . Webpage: Teaching Together

The objective of this proposal is to make known and widely available the curricular materials needed for children's education in low-income, Spanish-speaking communities. The experience has involved over 400 students and will benefit thousands of people. As a direct result of the proposal, a webpage has been launched to offer a number of educational resources that may be used by a broad sector of the educational community.

Our contribution, as we have pointed out, has been to design a webpage on children's education entitled, "Teaching Together," which is linked to the Earth

Charter and to the Spanish-based Fundación Valores. The purpose is to share curricular materials with Spanish-speaking teachers and parents, anywhere in the world, that may need assistance teaching children in the classroom. What stands out about the webpage is that the educational materials collected and selected (by over 400 Educational Science students of the University of Granada) are presented in a fun and interactive manner.

Methodological Aspects

As we mentioned before, the form in which this material is presented on the webpage is appealing and fun for the child, which is the only way for children to learn anything, and the only way in which we should always have been taught – through games, songs, stories, riddles, poetry, and even jokes. A wide range of material is available for teachers to use in whatever form is most convenient.

Besides all of these materials, we have launched a virtual library recommending fifteen 'must read' books for each of the six years of the Child Education phase. We also recommend educational films, teach how to make balloon figures and shadows, how to reach out to people with disabilities and – Ah! – since this is the year of magic, we also teach educators to venture inside the fascinating world of physics through magic.

We have also opened up an online forum for parents and teachers who might be seeking advice on a particular situation; people who have gone through similar situations may also help them to find a practical solution. By the same token, we also have a niche of short stories where grown-ups can go to reflect and express themselves, and a chest where anyone can send a treasure: a song, a poem, a story... that we can all share.

And finally, we have opened up a section called the "Ecological Niche," where we offer a series of recommendations that may be implemented in daily routines. These can be directly linked with Earth Charter principles 5, 6, 7 and 8, and related to the pillar "Ecological Integrity" in the Earth Charter.

Lessons learned

This project teaches students about the virtue of collaborative work between faculty members, and about the possibility to be able to make knowledge available to all those who might need it. This is thanks to the modern-day technological means at hand.

3. Toy Fair

The objective of this proposal was to set up a Toy Fair (featuring non-warlike, non-sexist toys), for children in several schools in the city of Granada. This experience has been carried out with over 200 students every year. Its mission is to promote a culture of non-violence and peace (Earth Charter principles 14, 15 and 16) among children and teachers.

Methodological Aspects

The Toy Fair is designed to offer used toys - in good shape, that are non-warlike or sexist - to children. This exchange is made possible through the donations of toys and in-kind donations by students of the Faculty. All the toys left over from the fair are donated to needy schools and NGOs.

In addition, complementary recreational activities, such as workshops and games, were carried out by the students. These were aimed at the children of the invited schools, where teachers and parents are provided with a detailed description of the features that a good toy should have, as well as the educational toys most suitable to children of every age group.



Project - The Magic of Science.

The following are excerpts of testimonials from the Toy Fair registration book.

Promising, congratulations; what has caught my attention is the fact that the children have felt more attracted to the workshops and the collaborative games, than to the exchange of toys itself.

It appears to be a wonderful idea, because many parents like myself were unaware of what sort of toys were most suitable for the development of our children; the idea of a toy exchange is also very good, and if we were to adopt this practice of exchange, we would also be finding promising alternatives to a consumer society.

Lessons learned

This project, like previous ones, teaches students about the virtues of collaborative work, not only among those students organizing and carrying out the event, but also among faculty peers submitting proposals to the different workshops. These kinds of activities help in the practical application of education for sustainable development by disseminating the principles of non-violence and peace in Pillar 4 of the Earth Charter (Democracy, Non-violence and Peace), to children in the early stages of childhood.

Experience in Sensorial Conscience, developed by Professor Alfonso Fernández Herrería

This activity on sensorial conscience in nature was carried out during the first quarter of the 2006–2007 term (October–January) in the subject area of Philosophy in Education, as part of the Degree Course of Pedagogy. During the second quarter (mid-February – mid-June), this activity was conducted in the subject area of Peace Education, within the specialization of Teaching and Child Education. Both are subjects of the Faculty of Educational Science at the University of Granada.

We are aware that the learning process, as normally conceptualized within the formal realm, is mainly focused on cognitive aspects. Although essential, these do not exhaust, by any means, all learning possibilities. It is fundamental to involve the three basic dimensions of the individual: affective, cognitive and active.

The objective of this practice was to give students in both subjects an experience of discovery – of affective closeness with nature through their senses – and establish a more personal connection with nature through this contact. For the most part, adults detach themselves from this sensitive world and from the personal experiences it implies. However, children have a conscience that is less dominated by words, and are therefore more capable of connecting with their senses. For this reason, students need to have a direct experience of what sensorial conscience is all about, and to value for themselves its educational potential. This serves to prove how easy and rewarding this technique can be.

In order to attain these objectives of eliminating, insofar as possible, the discrepancies between information (which increases quickly in quantity and availability) and a personal and social commitment to a sustainable way of life, it is useful to briefly describe the methodological aspects of this activity.⁵³

Methodological aspects

First, the students were provided with information about sensorial conscience. The practice of sensorial conscience involves attention and observation, not only from the senses, but also towards our own inner reality. Sensorial conscience does not require intellectual contemplation, concentration, or analysis, but, rather, it is about raising direct consciousness - not through ideas or concepts, but through the dynamic sensorial experience itself. For this reason, it is not about thinking about the world, about seeing it through words and through labels of any kind, but quite simply it is to see the world, feel it, listen to it, and touch it – to taste the unique flavour of the sensorial.

Sensorial conscience is about opening up the conscience to what it is, flowing with what is being

experienced, following it and allowing it to be what it is. It is not about rejecting what we dislike, nor selecting what we like, but rather adopting a sense of detached impartiality. Thus, our attention is conditioned in the least possible way by our thoughts, memories, experiences, affability, rejection, and prejudice, making our observation a more realistic experience.

This observation requires a recovery of the senses, although not in a disjointed form, but rather as a complete movement filled with sensitivity. So, it is not only about perceiving with your sight, hearing or touch, but with all the senses intertwined. When you look at the world with that immense sensitivity and with all the senses wide awake, there is an extraordinary sensation of energy, of beauty.

Sensitivity is a flourishing of the senses, which is a highly vulnerable condition. But we lose this vulnerability in the modern-day world of noise, brutality, triviality and superficiality in which we live. We have a natural tendency to become de-sensitized to the world around us. We don't really look; we just glance in a superficial and quick manner, without wasting too much energy. The result is boredom when all that we see is what we expect to see. This bogs down our sensorial conscience and it becomes extremely impoverished.

Watching without speaking, without judging, without assessing, the silence of the mind emerges naturally and with ease. Silence surfaces when there is profound attention, and the other way around, attention becomes more profound when there is silence. This proves that there are different degrees of conscience or sensorial attention.

After sharing these ideas, the students were asked to put them into practice in nature, and to prepare a written report that was later discussed in class. A total of 214 students completed the exercise, 43 of them from Philosophy in Education, and the remainder from Peace Education. The same teacher was in charge for both subject areas.

The impact of the exercise is reflected in the testimonials below, selected from the reports

⁵³ This experience was published in the magazine *Revista Iberoamericana de Educación*, edited by the OEI, in its edition nº 43/3 of 25-06-07 with the title: Incorporation of the emotional element in the initial training of teachers. An experience for the development of the sensorial conscience. Authors: Alfonso Fernández Herrería and M^o del Carmen López López, professors at the University of Granada. The entire piece is on the Internet, in PDF format.

written by the students:

When I opened my eyes I felt an inner peace which made me even feel sorry I hadn't experienced this before. Then, I observed everything around me in a different way. Its beauty was overwhelming.

The beauty was such that my roaming eyes did not know which way to look, ready to grasp every image and safeguard it like a treasure. The mountains rose majestically before me and I felt very small before such grandeur... How could we fail to see such perfection?... I really felt, and feel, privileged and grateful to the Universe for allowing me to enjoy its magnificence and perfect symphony. Thank you.

I could hear the swift rippling of the water, flowing... I decided to sit down for a while, facing it. There on the ground, I could feel the coolness and dampness of the soil penetrate my body... I remained there gazing at that stream... Time stood still and for a moment there, I felt like I was water.

The above excerpts offer proof of the real and profound impact – the amazement – that can emerge from the perceptive recreation of natural surroundings and spaces, which are in many cases familiar. This can also emerge from putting the student face to face with a reality that does not display all of its richness merely through the intellectual and rationalistic perspective to which we have grown so accustomed via formal education.

Lessons learned

This activity allows students to experiment with other more insightful 'encounters:' sensorial-corporal, affective, emotional, and spiritual, that is, those areas that have almost been forgotten in traditional educational practice. And it is precisely within them that the key to success for any comprehensive learning resides. If we wish for an authentic education, we must be able to overcome partial learning strategies. Either we embrace previously forgotten dimensions of the individual, or we will continue to reproduce the current

sense of educational disenchantment. By being truly comprehensive, education will also be healthy, satisfactory, and self-fulfilling, and not unhealthy and discouraging, as it is today.

From this experience, we can also gauge its efficacy in going straight to the core of personal change: through values, profound attitudes, and experiences that motivate individuals to truly get involved without having to create distractions for the lack of motivation. Quite the opposite, these are experiences that students have felt the desire to replicate regardless of any evaluation.

Through this experience, it has been possible to restore the connection between human beings and their natural surroundings; to eliminate the sense of feeling detached, disoriented, and uncommitted towards the environment; and to experience an affectionate relationship of empathy, friendship, fraternity, and even 'blending' with nature. Individuals who undergo this process will never harm the environment, or any other human being, because this closeness involves values such as care, respect, recognition, and gratitude towards the natural world. This has been reflected in students' writings, and even more so, in classroom discussion – a whole constellation of ethical and aesthetic values, which constitute the core of a sustainable way of life, as stated in the Earth Charter. With this heightened sensorial consciousness, it is then more appropriate to think about intellectual learning, since it is easier to become familiar with what we love than with what was almost indifferent to us.

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**An Integral Approach towards Sustainability:
Experiences of the National
University of Costa Rica and
the Centre for General Studies**

**Alicia Jiménez,⁵⁴ and Edwin Cedeño, Flor Salas,
Francisco San Lee Campos, Geraldly Peña, Heidy Vega,
Nancy Sánchez, and Rafael A. Zamora⁵⁵**



Introduction

The National University of Costa Rica (UNA) is committed to putting the principles of the Earth Charter into practice in its campus policies and administration, its academic activities, and its extension projects. The UNA has more than eleven years of experience using and promoting the Earth Charter to instil within students and professors a sense of belonging within the broader global community, and a sense of responsibility for present and future generations. The UNA is also actively involved in supporting educational initiatives under the framework of the United Nations Decade of Education for Sustainable Development.

⁵³ Earth Charter Centre for Education for Sustainable Development at UPEACE, Costa Rica

⁵⁴ Centre for General Studies, National University of Costa Rica

Environmental policy and management plan

The Sustainable Campus Programme is one of the key action areas of the National University of Costa Rica's environmental policy, established in 2003. The central objective of the Programme is to implement an integrated and sustainable system for waste disposal, resource water treatment and energy conservation at the University. This Programme operates through the involvement of students, professors and administrative staff in a range of activities aimed at minimizing environmental degradation on campus.

In 2007, two specific projects were launched as part of the Programme: The Participatory Management Plan, for improving solid waste disposal, and the Action Plan, for minimizing and safely handling the disposal of dangerous and toxic materials. Faculty members from the schools of Environmental Science and Chemistry have been in charge of spearheading these two projects.

Another initiative of the Sustainable Campus Programme has been the construction of a residual water treatment plant. These are almost nonexistent in Costa Rica due to high infrastructure costs. Nevertheless, the University applied for a loan in order to carry out the construction of the water treatment station – a testament to the commitment of university officials to put into practice the principles of sustainability.

Academic courses at the Centre for General Studies, UNA

The National University of Costa Rica offers a range of courses that incorporate the Earth Charter into the curriculum. However, the Centre for General Studies is particularly active in delivering course content aimed at analyzing the principles and the diverse dimensions of sustainability in the present-day context through an ethical perspective.

Every year, approximately 3,000 first-year students enrol in courses offered by the Centre, in such subjects as art, science and technology, social sciences, philosophy and the humanities. The courses are characterized by a

strong humanist vision, and in particular, emphasize the importance of building a sustainable and ecologically harmonious earth community.

Many of the courses offered by the Centre have developed innovative theoretical and practical approaches and use the Earth Charter as a general framework and ethical reference. **Some of the courses incorporating the Earth Charter include:**

- Environmental ethics
- Values, the environment and sustainability of life
- Socio-ecological vulnerability and risk management in Costa Rica
- Artistic expression and the environment
- Culture of peace
- Health and the environment
- Theatre, humanism and society
- Science, humanism, the environment and sustainability of life
- Sustainable livelihoods
- Natural resources, culture and sustainability

Extension projects

The National University of Costa Rica operates approximately 256 extension projects, some of which have drawn upon the Earth Charter as a key reference point. One such project in conservation has been carried out over the past four years by Professor Mayela Cascante, Dean of the Centre for General Studies, in collaboration with several professors of the Centre, in the region of Bolsón de Santa Cruz de Guanacaste. This region is seeking to preserve and promote local culture and ecological integrity despite a massive surge in tourism. To contribute to this aim, the University coordinators have drafted a document outlining a set of ethics, based on the Earth Charter, to underlie and sustain the project.

Another interesting extension project was undertaken by the acting Vice-Rector of Extension Projects, Elizabeth Ramírez. She developed educational programmes designed to empower members of rural communities living in Rio Cuarto de Grecia and Costa de Pájaros, Puntarenas, who had been negatively affected by the

environmental impacts of nearby development initiatives. The University's extension project drew on the principles of the Earth Charter to raise the consciousness and confidence levels of the local communities, and to examine economic alternatives that might help to alleviate their poverty.

Methodological aspects ~ the Centre for General Studies courses

The National University of Costa Rica grants its faculty members the freedom to select the content and methodologies of the courses they teach. As a result, a wide range of practices has emerged among teaching staff about how to incorporate Earth Charter principles and the notion of sustainability into the academic curriculum. The following descriptions are a sampling of those approaches used by UNA faculty.

Incorporating ethics and values into academic content

The Centre for General Studies offers a variety of courses incorporating an ethical dimension to the analysis of sustainable development issues. This is an innovative pedagogical approach, as it encourages students to reflect on the concrete impact of societal values on the path of development, technological advances and environmental crises in the modern-day context. For example, the course "Values, environment and sustainability of life" seeks to "promote values that enable students to convince and commit themselves to actions geared towards the recovery, conservation and protection of the environment in Costa Rica and on planet Earth." According to Professor Heidi Vega, it is important to incorporate ethics into foundation courses in order to instil within students a sense of respect and responsibility - values that every human being should practice in his/her relationship with society, and in particular with nature and future generations.

According to Professor Flor Salas, the integration of values and ethics into course content has helped to

foster a greater awareness amongst first-year students about environmental and social problems, at national and global levels. And, in her course entitled "Natural resources, culture and sustainability," Professor Nancy Sánchez utilizes participatory methodologies, such as projects with local communities, to develop within her students a sense of environmental responsibility and commitment. The main lesson is that finding solutions to modern-day environmental crises requires changing our ways of thinking, as well as promoting the values of solidarity, respect and collaboration. In this way, each person can begin to make a personal contribution to solving collective problems.

Developing participatory processes conducive to knowledge creation

For the vast majority of professors at the Centre for General Studies, it is crucial that education go beyond the transmission of knowledge and memorization; learning should entail processes in which the student is directly engaged and involved. An open and trusting learning environment generally facilitates student participation in class discussions, especially in situations where it is clear that all points of view are respected and valued.

Promoting respect towards elders

Sustainability begins when the intergenerational process is no longer viewed as a rupture, but as continuity. This premise is taken seriously by several professors at the Centre for General Studies, who require their students to develop and offer workshops, short courses and other innovative activities for senior citizens. In addition, elders are invited to prepare educational initiatives for young people. For example, in the course "Environment and Health," Professor Gerald Peña examines the historical involvement of our elders in the management of natural resources for food production. She incorporates personal narratives and biographical anecdotes of senior citizens, and encourages students to relate those experiences to their present-day context.

Providing practical experiences to promote the internalization of 'sustainability'

Various courses offered by the Centre for General Studies feature a fieldwork component where students and local community members participate in the organization and execution of an event, project or activity. In Professor Francisco San Lee Campos' courses, for instance, he promotes "...learning activities that have an impact within the university campus and in local communities." Some initiatives undertaken in his courses to realize the principles of the Earth Charter include: campaigning for recycling, reforestation and energy conservation; protesting against specific cases of environmental degradation; promoting eco-friendly products and causes; raising awareness about dengue fever; and developing eco-art and eco-murals.

Professor Edwin Cedeño also uses art as a means of raising awareness of sustainable development issues. He encourages students along with rural inhabitants of various fieldwork sites, to enact skits and theatrical productions relating to situations of personal and community significance. Such interaction with indigenous communities has also become an important way to re-connect students with values of spirituality and communion with nature.



In order to generate public interest in waste management over the past three years, the Centre for General Studies, in collaboration with the Schools of Geography and Environmental Science, has been organizing a waste disposal campaign every October in the central district of Heredia.

Participating in service and research in local communities

There is a general consensus among the faculty of the Centre that one of the most effective means of transmitting and implementing the Earth Charter principles is to encourage real-life engagement between students and local community members. Many of the Centre's courses include methodologies that require analyses of the environmental, social and economic problems faced by local communities, drawing upon the Earth Charter as a framework for action.



UNA CEG student working with kindergarten children.

Linking coursework with the Centre's extension projects

The Centre for General Studies has expressed a particular interest in involving students in its extension projects. This is an effective means of educating the student population, and, by extension, disseminating knowledge among their peers. The project mentioned earlier, carried out by Professor Mayela Cascante in the district of Bolsón, Guanacaste, is a case in point. In this project, students actively contribute to a range of activities related to the health and preservation of the history, culture, and environment of the region. Several professors in the Centre for General Studies are also involved in the wider community by sharing their knowledge, expertise and experiences outside the UNA sphere, through lectures and workshops held at off-campus educational centres, community development associations, and urban municipalities.

Using the Earth Charter as a methodological tool

The course "Vulnerability, society and environment" draws on the Earth Charter to explore the existing relationship between socio-ecological vulnerability and risk management. As such, the objectives are to critically examine and raise awareness of key problems that threaten the sustainability of different regions across Costa Rica, while adopting a holistic perspective.

In the course "A culture of peace," ongoing references are made to the Earth Charter in discussing a range of social, economic and environmental issues. Course participants have also visited schools in remote areas to gauge the living situation of children from less privileged backgrounds.

Example of a group activity using the Earth Charter ~

Professor Francisco San Lee Campos, UNA

Steps:

1. Form groups to discuss the mission and vision that we might have as human beings belonging to a community, an institution and/or the broader web of life.
2. Ask each group to identify three main problems that need to be urgently addressed in order to fulfill this mission and vision.
3. Invite the participants to write down the values that might guide them to realize their mission and vision.
4. Ask each group to consider the question, "What are the actions required to accomplish the mission, and who might help to facilitate the action plan?"
5. All of the above should be discussed in groups and common positions should be identified.
6. Distribute the Earth Charter to the participants and ask them to determine which values that they identified relate directly or indirectly to the Charter and its principles.

In courses such as "Environmental ethics," "Values, environment and sustainability of life" and "Natural resources and sustainability," the Earth Charter constitutes the main reference point for analyzing current social and environmental challenges on the local, national and global level. According to Professor Gerald Peña, the Earth Charter has helped her to approach environmental topics from a more holistic perspective. For example, in one of her courses entitled "Health and the environment," the Charter has served as a key starting point for reflecting, analyzing and discussing this interdisciplinary topic, particularly as it relates to quality of life.

Professor Flor Salas begins her course on environmental ethics by providing a general historical overview of the Earth Charter, and by focusing on its Preamble. Students are then asked to engage in a more indepth reading of the Earth Charter, to select a text related to the document, **and to answer the following questions:**

- What do you think about the text that you have just read, and how does it relate to the environmental and social problems in your country?
- How does the text relate to the Earth Charter?
- Prior to this class, did you know about the Earth Charter?
- What might be the 'added-value potential' of the Earth Charter in your community?

Lessons Learned

According to Professor Heidi Vega, the participatory methodologies adopted and promoted by the Centre for General Studies have paved the way for more fulfilling and rewarding learning experiences. Students are encouraged to become actors in their own learning process, to explore their potential, and to develop their creativity. This model goes beyond the traditional conception of education, in which the teacher is viewed as the sole generator of knowledge. Through participatory research methods and fieldwork carried out

in local communities, students develop the skills required to independently identify research problems and propose potential solutions to those problems.

Practical activities are generally considered central to enhancing the teaching-learning process. It is also recommended that students develop their own research problems from relevant research settings. Although professors can serve as a guide and facilitator during the process, they should never impose ways of thinking on their students.



Reforestation project done by CEG students in Puerto Jesus-Guanacaste.

According to Professor Gerald Peña, working with the Earth Charter also enables the use of theory in order to more effectively engage with our surroundings. More specifically, students can use the Charter as a tool to express their different perspectives, raise consciousness within and among peers, and put their ideals into practice through an innovative and participatory approach. It is important to note that in general, on the basis of the University's experiences, those students coming into contact with the Earth Charter have become more conscious, critical and objective, as the Charter serves as a channel for reflection on modern issues from a holistic and interdisciplinary perspective.

At the same time, in addition to incorporating the Earth Charter in campus policies, courses, and projects, another key mission of UNA is to realize the principle of sustainability in various aspects of campus life. The previously mentioned Sustainable Campus Programme has been specifically designed to achieve this aim.

Institutional efforts to minimize the discrepancy between academic theories taught in classes and the policy-making realities of the University Administration have helped clarify and change the attitudes and culture of the university community.

As noted, the National University of Costa Rica has used the Earth Charter as a theoretical framework in extension projects and selected courses, particularly in the Centre for General Studies. Some of the professors from the Centre have recognized the potential use of the Charter to undertake a holistic and contextual analysis of our global and local realities. The Earth Charter has been such a useful framework for many courses that the Centre for General Studies decided to design a course specifically about the Charter. During the semester-long duration of the course, students are invited to carry out an in-depth reflection of the document and put its principles into practice.

Experiential learning activities have also been promoted as part of the self-learning process in the Centre's courses. The transformative effect of learning through real-life experiences and reflecting on values and ethics can be seen through the concrete actions of students, such as the significant number of those enrolled in participatory courses or undertaking fieldwork who have already become (or are planning to be involved) in community service in their community, workplace, or study institution.

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Infusing the Earth Charter into Research
and Curriculum:
**One American University's
Example**

Peter Blaze Corcoran and A. James Wohlpart⁵⁶

Introduction

The region in which the university will be located combines population growth in a geographically constrained area, the Gulf of Mexico to the west and Lake Okeechobee to the east, with a unique and sensitive environment. Building on a strong programme at the undergraduate level, the university will have the opportunity to ultimately develop a centre for environmentally oriented graduate programmes and research. (State of Florida. State University System of Florida. Ten Year Development Plan for a New University in Southwest Florida. Report 2-3. Board of Regents: November 20, 1992.)



⁵⁶ Professors at Florida Gulf Coast University, United States

The founding mission statement of Florida Gulf Coast University, located in Southwest Florida, recognized the environmental sensitivity of the land and the controversy associated with the creation of a university in the region. Written before the site of the campus was determined, it offers an insightful premonition. The agreement to build the University in the middle of land that was, up to that time, undeveloped, ultimately led to the explosion of housing developments, the creation of shopping malls and business parks, and the widening of roads and canals. While the campus plan included very high standards for ecological restoration, the land around the university had only to meet the much lower county standards. As a result, the waterways that were created on campus to restore the historical water flow are dry, and the campus itself, with its native landscaping, is surrounded by gated communities with exotic plants and large water fountains.

Such are the unintended, but predictable, consequences of unconstrained development in a country whose economic growth is exalted above other values. At the same time, and ironically as a result of the building of the campus on environmentally sensitive lands, the University has worked hard to teach other values, those of environmental protection and sustainability. The recently updated mission of Florida Gulf Coast University states that the institution “practices and promotes environmental sustainability,” which becomes translated into the learning goal of ‘ecological perspective’ in the classroom. **As stated in one of the University Guiding Principles:**

Informed and engaged citizens are essential to the creation of a civil and sustainable society. The University values the development of the responsible self grounded in honesty, courage, and compassion, and committed to advancing democratic ideals. Through service learning requirements, the University engages students in community involvement with time for formal reflection on their experiences. Integral to the University’s philosophy is instilling in students an environmental consciousness that balances their economic and social aspirations with the imperative for ecological sustainability.

One of the ways the founding academic deans created to fulfil this ambitious ethical principle was to establish a common academic experience in environmental education. “The University Colloquium: A Sustainable Future” is a course required for graduation at Florida Gulf Coast University for all of our students. It is an interdisciplinary environmental education course designed to explore the concept of sustainability as it relates to a variety of considerations and forces globally and locally in Southwest Florida. In particular, the course provides a sense of environmental, social, ethical, historical, scientific, economic, and political influences and includes an important field component.

The road to environmental sustainability in universities is almost always a rocky one, and the idea of infusing the curriculum, beyond the Colloquium, with sustainability has proven stubbornly difficult. This has been true even with motivated faculty and strong support of deans and even, most surprisingly, at a new university with a birthright commitment to a broad definition of environmental responsibility and unbounded by tradition. To assist in realizing this institutional dream, and the larger dream of a sustainable Earth, we have turned to the inspiration and integrated vision of the Earth Charter. We promote it as an aspiration to envision sustainability in research and curricula. Further, as the University grows, we see the need to creatively imagine the infusion of environmental sustainability into our wider culture. To do so we have established an environmental education research capacity through the creation of an academic centre.



Prof. Peter Blaze Corcoran in class.

The Centre for Environmental and Sustainability Education at Florida Gulf Coast University nurtures and emphasizes sustainability education at our institution. **The mission of the Centre for Environmental and Sustainability Education (the Centre) states that we work:**

...toward realizing the dream of a sustainable and peaceful future through scholarship, education, and action. The Centre advances understanding and achievement of the goals of environmental and sustainability education through innovative educational research methods, emergent eco-pedagogies, and educational philosophy and practice based on ethics of care and sustainability. The Centre seeks to elevate the environmental mission of Florida Gulf Coast University and serve the University community, the local community of the Western Everglades and Barrier Islands, and the wider community of scholars.

A major component of the Centre's work is to bring current scholars in environmental literature, religious studies, and political science to campus to meet with students and to deliver public lectures. Key areas of emphasis include ethics, activism, and the literary arts. The Centre promotes the Earth Charter in its signature events, in institutionally-oriented research, and in what we call Earth Charter scholarship.

Our signature events include the two lecture series for the students, faculty, and staff at Florida Gulf Coast University and for the public of Southwest Florida. The Rachel Carson Distinguished Lecture is our major event drawing large crowds to our campus. The speakers embody the contributions of Rachel Carson most relevant to the Centre – public-policy based on sound science and ethics; active participation of an ecologically-literate citizenry; and appreciation of the natural world through the literary arts and environmental education. All of the lecturers have referenced the Earth Charter in their talks, thereby building awareness and reinforcing the relationship of the Earth Charter to key issues of our time – climate change, sustainable living, and religion and ecology, among others.

The goal of the Terry Tempest Williams Student Dialogue, our second signature event, is to raise awareness among Florida Gulf Coast University students and faculty about critical issues in our local region. The series focuses on sustainability and education for a sustainable future, including our role as stewards of our natural, cultural, social and political environments. Intended to spark youth activism and inspire the intellectual climate among the FGCU and Southwest Florida communities, the initiative fosters an open space for dialogue and student ownership of that dialogue. The events have focused on the general topic of agriculture and ethics, with specific discussions of social justice, environmental health, conditions of labour to produce food in America, and the humane treatment of animals who serve as human food. The Earth Charter addresses all these issues and is commonly referenced in the panel discussions. Many of the issues raised in the signature events are on the Centre's modest agenda of institutional research. For example, we are studying and promoting humane and sustainable alternatives to our corporate food system at the University.

Among other initiatives we have developed is a 'Guide to Eating Humanely and Sustainably with the Earth Charter at Florida Gulf Coast University'. The Earth Charter provides an alternative to industrial agriculture and the economic exploitation of labour and environment, challenging us to "Adopt patterns of production, consumption, and reproduction that safeguard Earth's regenerative capacities, human rights, and community wellbeing" (Principle 7). The Guide aims to link Earth Charter ethics to sustainable ways of



Homero Aridjis- Mexican Poet at Rachel Carson Distinguished Lecture.

life and to assist in the development of a culture of sustainability at our university and in the region.

Such a culture is supported by the decision of the interim president of the university to join the leadership circle of the American College and University President's Climate Commitment that is a part of the Association for the Advancement of Sustainability in Higher Education (AASHE). This initiative has bold ambitions and Florida Gulf Coast University has a tradition of rhetorical commitment to sustainability, without always following through. We seek to support the administration in truly realizing the aim of reducing its carbon impact through the development of sustainable food systems, which are sensitive to transportation, methods of production, and food choices that are 'lower on the food chain.' We believe significant carbon emissions savings can be realized while advancing Earth Charter principles.

As a part of this reinvigorated commitment to sustainability on the part of the university, the Centre has recently been invited to take the lead in developing a green building on campus – one that was originally planned to showcase sustainable building practices but is now being re-imagined as a space where green curriculum meets green architecture. We envision a planning process and learning space based on Earth Charter principles.

Our most significant area of Earth Charter related research, along with essays and talks, is the publication of two books. The first, [The Earth Charter in Action: Toward a Sustainable World](#) (KIT Publishers, Amsterdam 2005), was co-edited with others and with contributions from sixty-four writers from thirty-five nations. The book is a collection of over seventy thematic and descriptive essays inspired by the Earth Charter and demonstrating the rich diversity of its uses. It points toward the many possibilities of future utilization, including its ability to bridge the Islamic and Christian worlds and to work across the divide between the northern and southern hemispheres. Contributors are practitioners, experts, and Earth Charter activists from around the world.

The second book, [A Voice for Earth: American Writers Respond to the Earth Charter](#) (University of Georgia

Press, Athens, Georgia forthcoming 2008), we co-edited as part of our work at the Centre in order to provide a literary voice to the ethical principles outlined in the Earth Charter. The writers whose contributions are collected in this book reflect upon the ethical dilemmas that confront us and assist us in understanding the nature of the crisis before us. Their voice is part of a growing collection of voices calling for—and indeed initiating—a cultural transformation from the Cenozoic era to what Thomas Berry calls the Ecozoic era, a new period of mutually enhancing Earth-human relations. We hope to advance Earth Charter scholarship through our own research and writing and by bringing together the small community of Earth Charter scholars and sharing their research with the wider world.

Along with advancing Earth Charter scholarship, we have sought to infuse the Earth Charter into the curriculum at Florida Gulf Coast University. Our efforts to bring a discussion of ethics through the Earth Charter has occurred at different levels – as a component in a course, as an organizational framework for a course, and as a unifying principle in a curriculum. As already noted, the "University Colloquium: A Sustainable Future," our mandatory course in environmental education and sustainable development, includes the Earth Charter as a component to introduce students to a broad understanding of sustainability. Students read and discuss the Earth Charter in class and are then required to write about the document in one of the five short academic essays assigned in the course. It is often the subject of a lively discussion as students and faculty members read the principles and sub-principles together and consider their value and its efficacy. This open-ended discussion is founded on strong critical and creative thinking skills.

Our first course to use the Earth Charter as an organizational framework is one that we team-teach. Environmental Literature, an interdisciplinary course in the Communication, English, and Environmental Studies programmes, considers the role of sustainability within the humanities, focusing especially on exploring an ethical perspective that promotes respect and care for the community of life, ecological integrity, social and economic justice, and democracy, nonviolence, and

peace. We read several works – philosophical, theological, and political – through the lens of the Earth Charter in order to open a space for a dialogue about ethics and values; the Earth Charter acts as a touchstone for our discussion and not as the defining ethical system for the entire class. Ultimately, through the readings and discussions in the course, each student works toward developing his or her own personal ethics of sustainability. We expect students to read the Earth Charter with serious and intense questioning and invite and expect critical analysis of the principles outlined in the document and in the other texts. The course includes a service learning component which enables the students to enact their ethics of sustainability, bringing them to life.

Furthermore, we look to consideration of the Earth Charter as a unifying principle in a curriculum. For example, the University has committed to enhancing education for sustainability through what is called, in the United States, a Quality Enhancement Programme (QEP). A QEP, which is an institutional focus on a central, mission-driven area of the university for assessment and improvement, is required for many universities across the United States for their accreditation. At Florida Gulf Coast University, the QEP, a five year project, focuses on the development of an ‘ecological perspective’ and ‘community awareness and involvement,’ two of our unique university-wide learning goals. Our work during this period is to inculcate sustainability education across our curriculum using such documents as the Earth Charter. One prime example of this work is in our first year writing classes, required of all students; the faculty members are working to pilot key essays that deal with such topics as climate change, agricultural practices, and social and environmental justice. In order to advance this discussion in these classes, faculty members also use the Earth Charter as an example of shared values that advance sustainability. Ultimately, the goal is to work towards including these essays into a Composition Reader that is used at many institutions across the United States.

Finally, we are in the very early stages of conceptualizing the Earth Charter as a core for a Liberal Studies major offered in our College of Arts and Sciences. This is a bold

and daunting possibility presented to us as a challenge by our Dean, Donna Price Henry. The incipient concept is to create an interdisciplinary, liberal arts programme that considers the concept of sustainability broadly – from the perspective of the natural sciences, the social sciences, and the humanities and arts. A guiding concern in this curriculum might be the ethical dimension behind issues of sustainability, and the Earth Charter has been discussed as a method for engaging this discussion. In support of an effort such as this, the Centre for Environmental and Sustainability Education is developing “A Guide to Teaching the Earth Charter at Florida Gulf Coast University” that includes methodological suggestions for appropriate values education.

In conclusion, higher education presents particular challenges for the use of the Earth Charter. First, one needs to make the case for materiality and relevance to the curriculum, and perhaps to research, depending on the institutional ethos. Sustainability always takes place in a particular context. The Earth Charter’s appeal to our university vision and mission of environmental sustainability helped us to accomplish this. Second, because the Earth Charter is normative, it arouses concern about how values are taught and about whose values are taught. These are vitally important questions to address in the tradition of academic freedom and critical inquiry. However, we believe that sustainability is the great moral question of our time, the meta-narrative of the twenty-first century. And we believe it is a moral responsibility of universities to study and teach sustainable living. Infusing the Earth Charter into research and curriculum at Florida Gulf Coast University has helped us to assume this sober responsibility.

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Integrating Education on Sustainability into Teacher's Education

Alicia Jiménez⁵⁷ and Michele Martin⁵⁸



Introduction

The Seychelles National Institute of Education (NIE)⁵⁹ is a post-secondary institution responsible for the training and development of primary- and secondary-school teachers. The NIE administers pre-service and in-service programmes on a variety of subjects, and offers two mandatory⁶⁰ courses in environmental education for sustainability, as part of the pre-service teacher education programme. Professor Michele Martin is one of faculty members in charge of the two courses, both of which use the Earth Charter as a central part of the course curriculum. A crosscutting theme developed in both courses, related to sustainability, is the interconnection between social and ecological problems and their solutions.

⁵⁷ Earth Charter Centre for Education for Sustainable Development at UPEACE, Costa Rica

⁵⁸ Seychelles Institute of Education, Seychelles

⁵⁹ The NIE is located in the Seychelles Islands, an archipelago on the Indian Ocean, northeast of Madagascar. The NIE does not offer a degree in education (in fact, there are not any universities in the Seychelles) yet does offer pre- and in-service training for the nation's primary- and secondary-school teachers.

⁶⁰ These courses were made mandatory in 2003, and had been offered as optional/elective since 1990.

The Seychelles National Institute of Education (NIE) is a post-secondary institution responsible for the training and development of primary- and secondary-school teachers. The NIE administers pre-service and in-service programmes on a variety of subjects, and offers two mandatory courses in environmental education for sustainability, as part of the pre-service teacher education programme. Professor Michele Martin is one of faculty members in charge of the two courses, both of which use the Earth Charter as a central part of the course curriculum. A crosscutting theme developed in both courses, related to sustainability, is the interconnection between social and ecological problems and their solutions.

The two courses are: **NEED01 Environmental Education: Principles and Practice**, and **NEED02 – Issues in Environmental Education**. The objective of NEED01 is to introduce the principles and practices of environmental education, mostly through group work in the classroom using experiential learning methods and hands-on activities. The objective of NEED02 is to provide an opportunity for students to plan and implement an independently designed community service project, thereby putting theory into practice.

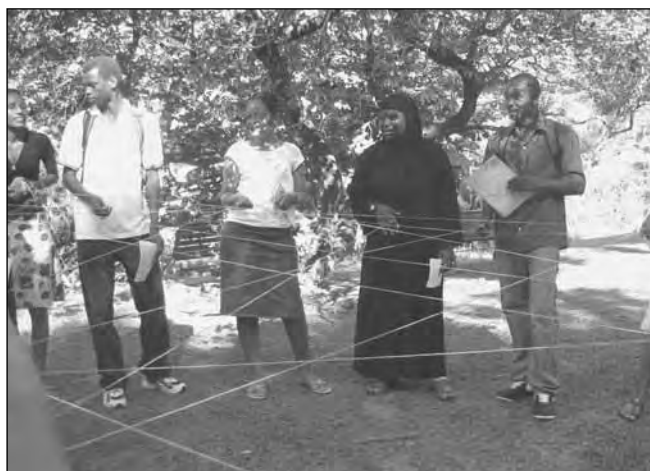
Both courses are offered three-hours per week for nine weeks. The participants are student teachers, mostly young women between the ages of nineteen and twenty-one years old. Approximately 120 students from a variety of disciplines take these courses each year.

Methodological aspects

Course objectives and the role of the Earth Charter

In the NEED01 course the focus is on environmental concepts and principles (with reference to international charters and treaties), local environmental education policy, resources for teaching and learning, and in-classroom teaching strategies. Much of the focus is on pedagogy, emphasizing student-centred and experiential learning.

The Earth Charter plays an important role in this course. It is used as a tool to help the students understand the connections between environmental and social issues, and the need for environmental education to incorporate these connections. Michele notes that because the courses are mandatory, that not all students enrolled are particularly interested in environmental issues. Instead, many are more interested in humanitarian issues, such as poverty reduction, and human and gender rights. However, the Earth Charter provides an entry point to pursue their passions for social issues, and then to start understanding that ecological and socio-cultural problems are interrelated.



Activities in course NEED01.

The class spends one three-hour lesson discussing and reflecting on the Earth Charter. They use different methods to analyze and internalize the Earth Charter; one of the most common is to summarize one of the principles and present it to the rest of the class in the form of a drama, song, poem or drawing. (See Box 4). This has been a very effective process and the Earth Charter's aspirations serve as a framework for defining environmental education. During their teaching practicum, NEED01 students must also integrate environmental education into one of the lessons they teach, and are asked to relate this to the vision of the Earth Charter.

Box 4: The Earth Charter, interpreted by class DPT3A**Preamble**

The protection of the environment is everybody's business.

The earth is a home for all living things.

One mistake from us can destroy us all.

Together we can overcome the challenges that may arise.

It's our duty to protect the environment in any way we can!

Respect and Care for Life

Every form of life is precious.

Accept them and prevent them from harm.

Promote peace and harmony in the community.

Give opportunities to fulfill our rights.

Preserve our environment for the future.

Ecology is Life

Let us protect it, safeguard it.

Do not abuse its resources.

The future generations need it.

Educate them and live longer.

Social and Economic Justice

We all have the right to life.

Water, clean air, food, shelter, and safe sanitation are what we need for healthy living.

We, human beings, let's unite with power to bring reality to our human needs.

Democracy, Non-violence and Peace

Boom!

That must be the sound of a bomb.

It's violence time!!! Run everybody!

Oh dearest Peace,

Save our souls from violence.

Come and help us

live in justice and harmony.

The NEED02 course is more action-oriented; the class explores local socio-ecological problems through community service-learning approaches. The students used to receive a standard set of local issues to choose from – such as waste, deforestation, habitat loss – but the course has been redesigned so that students now

choose their own area of interest. The projects students have chosen focus on a range of ecological, social and cultural issues. The Earth Charter is used as a basis for the actions of students' community service projects, which are framed in terms of how they work towards fulfilling the vision of the Earth Charter. Students select and then research a local problem (issue), identifying the relevant part(s) of the Earth Charter to which their project corresponds. In their final report, students must explain the relationship between their project and the Earth Charter.

Description of teaching and learning style

In the NEED01 course, the content and issues discussed are mostly set by the NIE. Student participation is promoted through hands-on learning, group work, field trips and learning and teaching games.

In NEED02, students are more involved in deciding on which issues to focus. In the third week of class, students choose their group members and then each group selects a different socio-ecological issue to explore. After deciding on what issue to focus, the students practice pedagogical approaches in their research and discussions, such as a problem-solving focused community service-learning method. In addition to identifying and researching their issue, groups are responsible for deciding on possible actions they could take to address or help solve their issue or problem, and then evaluate and report on their work.



NIE Clean up campaign - Course NEED02.

This problem-solving method is very helpful to enhance the students' experience with an experiential learning process. The NEED02 students go through the process of planning and implementing a service learning project so that later, as teachers, they will know how it works and how they might use this approach with their own students. Throughout the learning process, students have opportunities to share what they are learning and doing during the course with each other and their course teachers.

An important thing to take into account when using hands-on and community service-learning methods is that there is a tendency to focus solely on local issues. In her courses, Michele deals with this tendency by making efforts to make deliberate linkages to local issues' global context and to bring what is happening in other countries into the classroom.

In addition to using the community service-learning method, Michele Martin combines a variety of teaching strategies and methods in her classes – group work, discussions, field trips, games and visual arts. The following are descriptions of some of the techniques that Michele uses in her teaching.

Visual brainstorming

This exercise helps to address the meanings and connections of different concepts. For example, Michele uses it to help students analyze the wide range of potential meanings of the term 'environment.' Students come up to the classroom blackboard and use coloured chalk to create a drawing of what the word brought to mind. The result is a rich visual image that provokes critical discussion on what students included and what was left out – often more effective than using words.

Role play

This activity simulates a type of 'council of all beings' that focuses on a specific environmental issue. Students choose a variety of human and non-human roles to express their feelings, and the challenging situations they face in real-life.

Field trips

It's important to go outside. In NEED01 students spend a couple of sessions focusing on learning outside the classroom; sometimes it's simply to go outside under a tree to present group-work, and sometimes it's more involved, such as exploring their nearby environment. Students have undertaken environmental audits of the school's grounds, explored the living things found within the school compound, toured the environmental education resources available in their library and at the environmental education unit at the Ministry of Education next door, and have visited the local dump site. For the teachers, using the UNESCO/UNEP CD *Teaching for a Sustainable Future* has proven to be very helpful to plan and implement these types of activities.



Field trip NEED02 course.

Sometimes the students participate in choosing which places to visit (these can coincide with their research projects), and sometimes the teacher decides, especially when students are not familiar with the local area, and when certain field trips would be of particular benefit to their teacher formation process. In NEED01, students complete one full-day trip, either to visit another island, or to visit a natural area on the main island (where NIE is located). In NEED02, students also tend to go on additional field trips on their own, often to advance their research projects.

Games

Students are introduced to games, such as those from Joseph Cornell's *Sharing Nature with Children*, and "Woolly Thinking" in *Global Teacher, Global Learning* by Graham Pike and David Selby; which, in Michele's opinion, is a particularly excellent resource and relevant to the Earth Charter, for example, GloBingo. She also uses a variety of local resource materials (See Box 5).

Box 5: Education resources produced in Seychelles

Beaver, K. & C. Morel. (2003). Learning for Sustainable Living in Seychelles. Mahe: Nature Seychelles. (available at www.natureseychelles.org)

Martin, M. (2001). *Birds are brilliant! Activity guide for primary teachers*. Seychelles: BirdLife Seychelles.

Martin, M. (2000). *Guide to the wildlife of Cousin Island*. Seychelles: BirdLife Seychelles.

Martin, M. & M. Gara (1999). *Coastal and marine activity book*. Seychelles: Wildlife Clubs of Seychelles.

Martin, M. (1994). *The little green book for schools*. Seychelles: Ministry of Education and Culture.

Seychelles Ministry of Education (1994-present). *Enviro-News: Seychelles' environmental education newsletter*.

Tirant, M. & M. Martin (1996). *Environmental education for sustainable development: activity guide for primary teachers*. Seychelles: UNESCO / Seychelles Ministry of Education and Culture.

Interaction between teacher and learner

Given the methods used in her classes, Michele does not spend much time lecturing. Her role is more like a facilitator of information and of the exchange of ideas and she gives students many opportunities to practice being 'active thinkers.' One way she promotes critical thinking is by asking

students to do critical reflections at the end of each class, whereupon they write about what they liked and learned and didn't like about each session, and why. In this way, students are challenged to think actively and critically, and to express their own beliefs.

There are other ways students are involved in making decisions during the courses. In NEED01 Michele asks for class input on a field trip site and in NEED02 students choose which issue they will research, and which solutions and actions they will take. One example of student decision-making that impacted the course was one group that decided to bring all of their projects together and hold an "environmental festival" at the NIE.

Inclusion and application of values

Although these courses are not explicitly values-driven, values certainly play a key role. The courses focus on pedagogy and are designed to help student teachers learn to integrate environmental, social and economic aspects into their subjects once they get into the school classroom. The courses provide opportunities for students to examine their own values and reflect on what kind of a teacher they hope to become. The courses also provide opportunities for students to think about their passions and to try to bring them into their teaching. The Earth Charter plays a key role in these courses, and getting familiar with the Charter's values and principles allows teacher and students to deepen their understanding and reflection on sustainability.

Evaluation of student performance

The NIE requires that students be assessed based on two major assignments. In NEED01 students are assessed on a lesson they give on teaching practice, and their critical reflections afterwards. The other assignment is a student's portfolio (journal) of critical thinking exercises. In NEED02, students are assessed based on their environmental education portfolio, which includes weekly critical reflections, an environmental autobiography, and a self-evaluation. The other assignment is their group service-learning project; students are assessed on

their project plan, the action they take, and a final report.

Actions and results from the learning process

In 2007, the NEED02 students organized an environmental festival which included displays designed by students to depict and describe what they had learned and achieved in their project, hands-on workshops and a variety show. The Earth Charter was the organizing framework for the projects and the festival. The festival featured six student projects on various topics: invasive plants; medicinal plants (especially natural contraceptives); paper waste; packaging waste; promoting local, homemade drink and food alternatives to store bought (i.e. juices, snacks); and traditional Kreol musical instruments. Students also reported on actions their group had taken, including removing invasive creepers, and organizing a clean up in a particular area to reduce the rat population. The event opened with an exhibition, then workshops, and closed with a variety show that included poems, songs, dances, traditional music, and storytelling – all performed by students. The NEED02 students invited students from other schools to attend the festival, and many schools sent student delegations.

ecological ones; however, the opposite is also true, especially among younger students. The Earth Charter provides a great and unifying vision that has helped her broaden her students' focused interests.

When beginning a process for educating for sustainable development, Michele notes that it is important to be sensitive to, and take into account, each student's interests. She uses the Earth Charter to help students come to the understanding that social and ecological justice issues are deeply intertwined – problems, causes, consequences and solutions. **According to Michele:**

By letting my students start with social justice issues and then work on interconnections, I (and they) have found that they do actually care about environmental issues, and they do want to do something. This realization came out as a fairly strong theme in the NEED02 students' own self-evaluations.

Using integrative approaches to education helps promote holistic-thinking in students and makes the educational experience as inclusive as possible. At the NIE there is a continual learning process to keep improving teaching practices, and students' feedback is of great importance to that process.

Lessons learned

One of the limiting factors in promoting Education for Sustainable Development has been that while teachers are often asked to include aspects of sustainability in their classes, many of them have not been trained to do so. The NIE is working to address this situation by including two mandatory courses on environmental education for sustainability in their pre-service and in-service teachers' education programme.

Michele Martin, teacher of the NIE's environmental education for sustainability courses, has found that it is not always easy to address all aspects of sustainability in class because students often have different interests and passions. She has found that many of her students are more passionate about social justice issues than

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The Earth Charter as a pedagogical tool for sustainability at Yerevan State University, Armenia

Marina Bakhnova Cary⁶¹



Introduction

Professor Karine Danielyan⁶² has been an educator all her life. She decided to make 'sustainable development' – a highly disputable semantic novelty in the early 90s – part of her personal teaching practice in 1994. She made the hard decision to resign from her position as Environment Minister in the first post-Soviet democratic government of independent Armenia, and to return to academia, her former professional career. The decision cost her many a sleepless night, as well as heated discussions with members of the Armenian government and with her friends and colleagues. It was a tough decision for her, as she had represented her country at the pivotal Rio Summit in 1992, and was committed to the Agenda 21 document as a blueprint for governance, planning and policy making.

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⁶² Dr. Karine Danielyan is a Professor at Yerevan State University and the Chairperson of the Association for Sustainable Human Development of the Republic of Armenia (the Association), an ECI Affiliate in Armenia.

Development of new educational materials

There were no educational materials on sustainable development available in the entire post-Soviet territory in early 90s, so Professor Karine Danielyan had to start from scratch. In 1994, she wrote a textbook, *Theory and Practice of Sustainable Development*, which later became the foundation for a new university course with the same name, taught by the faculty in the Department of Geography at Yerevan State University. The book became the first educational publication on sustainable development in the country. It was not easy to convince the administration of the university to introduce such a new, revolutionary pedagogical approach to a traditional and rigid education process, but Karine would not take 'no' for an answer; thus her first textbook was formally adopted as an official educational publication.

In 1998, Professor Danielyan participated in a workshop for the post-Soviet countries-in-transition about the principles of sustainable development and the Earth Charter, which was held in Moscow. This was her first encounter with the document, one which would have a big impact on both her personal and professional life. She thought it was very inspiring and comprehensive, and, in 1999, she decided to include an additional chapter on the Earth Charter in her textbook. Karine also integrated the Earth Charter into the content of her university course on sustainable development.

Since 1994, her textbook, *Theory and Practice of Sustainable Development*, has been re-printed three times: with the help of United Nations Development Programme (UNDP) office in Armenia; the Earth Council in 1999; and the UNDP office in Armenia again, in 2000. Karine is happy to see that her textbook has been in high demand over the past decade and is still widely used by many universities in Armenia, Georgia, Belarus, the Russian Federation and the countries of Central Asia in their own courses on sustainable development.

In 2003, the UNDP office in Armenia commissioned Yerevan State University to develop a new textbook, *Human Development*, in the Armenian language for use

at the national universities. Professor Danielyan contributed two chapters for that textbook, entitled "Global environmental problems," and "Sustainable Development." Since 2003, this textbook has been the main educational publication in the Masters of Science programmes in all of the departments of natural sciences at Yerevan State University.

Professor Danielyan's students and alumni are also involved in the development of educational materials. They actively participated in the adaptation process of the "The Earth Charter for Children," and created a brochure of this that has been published in the Armenian, Russian and English languages. The Earth Charter for Children is a three-page brochure, written in the poetic and instructive style of a fairy tale, and quotes the beautiful words of Antoine de Saint-Exupéry in *The Little Prince*: "...get up in the morning, wash yourself, tidy up yourself, and right after that, tidy up your planet."

In simple and clear language, the Earth Charter for Children brochure teaches children that:

Wisdom comes when you realize power brings not only rights, but also great responsibilities. And, first of all, we have the responsibility to our brothers -- yes, our brothers and sisters on this planet -- the animals and plants.

Together with beautiful pictures and posters drawn by students and pupils, The Earth Charter for Children is very popular in Armenian schools and kindergartens.



The Earth Charter for Children in Armenian, Russian and English languages.

Methodological aspects of the university course on sustainability

Professor Danielyan began teaching her new course with only two hours available per semester, which later became four hours. Presently, there is a complete 72-hour course available for 50-60 third year students in the baccalaureate programme of the Department of Geography, and an additional 25-30 students coming from the baccalaureate programme in the Department of Chemistry, every year. There is also a 170-hour course for second year students of the Masters of Science programme.

The courses offer an opportunity to analyze, reflect and discuss the principles of universal ethics and their importance for re-shaping our lifestyles in a sustainable way.

Professor Danielyan also supervises two to three students who are writing their graduation thesis papers per annum, as well as students who are writing term papers on sustainable development that always have Earth Charter ethics integrated into them.

She starts her course by handing out the Earth Charter brochure (in Armenian, Russian and English languages) to the students, so that they can read this at home. In her classroom, discussion is encouraged. To facilitate practical exercise, she breaks students into four working groups in accordance with the four main pillars of the



The oath of the University freshmen.

Earth Charter to discuss their part within each group. After discussion, all the students present their part, thus sharing their key findings and reflections with the whole group, which initiates a wider class discussion. Professor Danielyan explains that this approach helps her students to get to know the Earth Charter text very thoroughly. **After this activity, she offers to hold discussions on the following themes:**

- The implementation of the Earth Charter principles in the modern world (problems and roadblocks, possibilities to overcome them, prospects for the future)
- The implementation of the Earth Charter principles in the Republic of Armenia (problems and roadblocks, possibilities to overcome them, prospects for the future)
- The connection of the Earth Charter with global conventions signed by Armenia; as well as its connection with the UN Millennium Development Goals
- The ways each of the students can use the Earth Charter in their daily lives and as professional educators in the future.

From university auditoriums to school classrooms

Most of Professor Danielyan's university graduates become schoolteachers and she made it a rule to know as much as possible about their professional lives. While it is much easier for her to keep in constant contact with those who find jobs in the capital – contacts are more difficult to sustain with alumni who work in distant rural regions of Armenia – she systematically shares with them the latest materials for use in their schools and invites them to participate in Association activities.

Thus, the project "Earth Charter for Children" started in November 2000 during the Regional Earth Charter Workshop held by the Earth Council in Yerevan by its' late director, Maximo Kalaw Jr., and the Newly Independent States (NIS) Area Manager, Marina Bakhnova, in cooperation with the Association. It included an art exhibition, "Earth, Our Home." The children were inspired to present

pictures, drawings, and posters illustrating one of the Earth Charter principles that had impressed them most. Awards were given to the winners, but no participant was left unnoticed.

A school theatre play was written by senior high school students and teachers, called "Earth Charter Saves the Beautiful Earth," which was also first presented at the Regional Workshop in November 2000. The school pupils and their parents made attractive costumes and presented the participants of the workshop with beautiful songs and poems devoted to Earth, Nature and a brave knight named the Earth Charter – who saves the Earth from disaster by showing people how to protect and love Earth and each other. This performance became very popular and is still being presented by the students of different schools in Yerevan and in other Armenian cities. There have also been several national contests for the best children's art work, poems, songs and plays devoted to sustainable development and the Earth Charter, held by the Association with active participation from Professor Danielyan's students.

The Association for Sustainable Human Development of the Republic of Armenia (ASHD)

Although Professor Danielyan had worked on these issues in earlier years, the Association for Sustainable Human Development (ASHD or the Association) was officially registered in April 1996. The ASHD Coordination Council consists of 21 members, among them representatives of the Armenian Geographical Society, the Armenian Republican Women's Union, The League of Armenian Women, the Fund against the Law Arbitrariness, The Scientists Union, the Armenian Statistical Computer Society, as well as professionals in different fields of knowledge – environmentalists, geographers, chemists, economists, psychologists, writers, journalists and engineers, among others.

There are six commissions in the Association working on issues of: environment; economy;

society and democracy; human rights; education and spiritual-psychology; information; and international relations. The Association has nine branches in different regions of Armenia. The main goals of ASHD are to raise awareness and openness to the notion of sustainability, and to promote changes in people's lifestyles, behaviours and the influences on decision-making processes from within key groups of Armenian society.

There are many educators among the ASHD members, who work at universities and schools; most of them integrate the Earth Charter into their teaching practices.

Educating for Sustainable Development with the Earth Charter in non-formal settings

Since 1998, the Association has been publishing brochures and magazines to promote the understanding of the concept of sustainable development. Much of this effort is undertaken using the Earth Charter as an instrument and as an ethical framework that clarifies the vision of a sustainable society. They also disseminate the international experience among different stakeholders of Armenian civil society: parliamentarians and youth, educators and governmental officials, women and local authorities, scientists and academia, and local communities in rural areas.

The Association also uses the national mass media as a very important tool for their educational efforts. Professor Danielyan, and other members of the Association, make regular public appearances on national television and radio programmes, publish articles in national and local newspapers and magazines, sharing their thoughts on the Earth Charter and explaining its importance for present and future generations.

The principles of sustainable development and Earth Charter ethics were the main themes at several high-level roundtables held at the Armenian Parliament, in governmental agencies and in the

Armenian Constitutional Court. In these settings, Professor Karine Danielyan shares Earth Charter brochures and facilitates discussions on the importance of changing government and public approaches to the very concept of 'development' – urging the use of the Earth Charter as a framework and guiding document to steer development in a sustainable direction.

It should be mentioned that, influenced by the Earth Charter ethics, two participants of these roundtables later wrote the book, "The Guide for Higher Education, The Ecological Individual Culture" (in Armenian); the full text of the Earth Charter is included in this book. One of the authors of this publication is a former Deputy of the Parliament and an incumbent Rector of the Polytechnic University of Yerevan, and the other author is a professor at the Institute for Business and Politics. All major universities in the country received this book free from the publisher.

In 2007, the Association published the Russian translation of the Earth Charter Guidebook, "Bringing sustainability to classrooms" for schoolteachers, developed by the Earth Charter Initiative. At present, the book is being disseminated among teachers at Russian-speaking schools in Armenia and is being translated into Armenian for wider use. The Association is also distributing the Guidebook in the Newly Independent States (NIS) through seminars, training workshops and conferences that have taken place in Yerevan, Tbilisi (Georgia), Moscow (Russia) and Dushanbe (Tajikistan) during the first semester of the 2007 academic year. It has also been mailed to educators in Belarus and Moldova.

Professor Karine Danielyan and her colleagues are also planning to develop and publish "The Guide for Decision-Makers," with the Earth Charter as a framework and an integral part of the book.

The following are a few of the many publications of the Association for Sustainable Human Development:

1. *The Sustainable Human Development Concept: Theory and Practice*. Dr. Karine Danielyan, Yerevan, First edition, 1996. Second edition, 1998. Third edition, 2000.
2. *Armenia from the viewpoint of the Sustainable Human Development Concept Valued by NGOs*. Edited by Dr. Karine Danielyan, Yerevan, 'Lusakn,' 1997. (Armenian, Russian).
3. *Towards Sustainable Development of Armenia*. 2 volumes. Edited by Dr. Karine Danielyan and Dr. Lemvel Valesyan, Yerevan, 1999, (Armenian, Russian, English).
Volume 1. Basic Materials and Experience of Developed Countries (84 pages).
Volume 2. Experience and Problems of Countries in Transition (100 pages).
4. *The Earth Charter for Children*. Author Dr. Karine Danielyan. Prepared by Youth section of the Association for Sustainable Human Development. (Armenian, Russian, English). Yerevan, 2002.
5. *Experience of Higher Education for Sustainable Development in the RA*. Dr. Artak Sahradyan. Proceedings of the International Conference, 'Higher Education for Sustainability,' UNESCO, Luneburg University, Germany, 2006.

Conclusion: moving forward

Professor Karine Danielyan sees her personal commitment to the vision of sustainability as an opportunity to help her students become 'change agents for the future,' – multipliers of the Earth Charter principles and ethics, which will be necessary for changing existing lifestyles in order to ensure a sustainable future for Armenia.

Along with her colleagues from the Association, Karine believes that their mission is to sensitize individuals and groups about sustainable development principles, and raise awareness of the Earth Charter at all levels, from

the members of the Parliament to the participants of local training workshops. The Association for Sustainable Human Development has been working on this mission since 1998, with projects that target students, decision-makers – government officials, local and municipal authorities, judicial officials and legislators – and pupils, from primary school to high school.

Karine reflects that, during the initial years of the project, the majority of those who had read the Earth Charter for the first time expressed their doubts about its dissemination, let alone its endorsement, by the Armenian people. However, in spite of the multitude of different international declarations, the Earth Charter found its way into the hearts of the Armenian people. A big role in this process of acceptance belongs to a new generation of 'change agents' who were educated and brought up by Professor Karine Danielyan and her colleagues from the Association for Sustainable Human Development. Many of her students continue to refer to the Earth Charter in their scientific work, thesis papers and in their everyday activities long after they leave the university halls.

Professor Karine Danielyan and her colleagues work voluntarily with the Earth Charter (without funding), and intend to continue working as volunteers, integrating the Earth Charter into present and future sustainable development projects. For example, the Association has reached an agreement with the Ministry of Education of Armenia to include the Earth Charter Guidebook "Bringing Sustainability into Classrooms" as an officially recommended guidebook for the teachers. However, the Ministry believes that the mere distribution of the guidebook will not be effective – for wider distribution and more impact, the guidebook should be translated into Armenian and, in the future, a series of teacher's training workshops should be held all over the country.

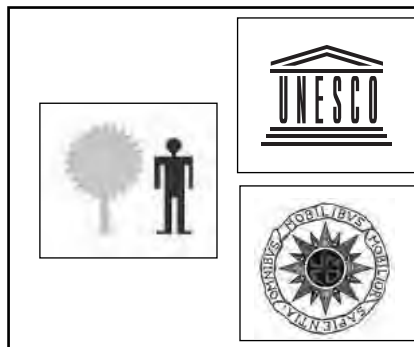
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Faculty experiences using the Earth Charter in Distance Learning Programmes

Ángeles Murga and María Novo⁶³



Introduction

Since its launch in March 2000, and its endorsement by UNESCO in 2003, the Earth Charter has become one of the many calls by international organizations to governments and individuals to spearhead positive change in the societies in which we live. As such, the Charter might best be regarded as a code of ethics, one that offers a solid basis for building a sustainable future governed by respect for nature, universal human rights, economic justice and a culture of peace.

⁶³ UNESCO Chair of Environmental Education and Sustainable Development (National University of Distance Education, UNED, Spain)

The Earth Charter promotes values and principles that are a key part of the pedagogical framework required to design, and then implement, course content geared towards realizing the notion of sustainability. The document itself can be used as an effective, multi-faceted methodological tool in teaching-learning processes; as a basis for developing didactic materials; as a catalyst for dialogue about the interrelationship between social and ecological values; and, as a bank of key concepts related to nature, human and social harmony, and sustainable development.

Cognizant of all of these possibilities, in October 2002, the faculty members of the UNESCO Chair of Environmental Education and Sustainable Development at the National University of Distance Education (UNED, Spain) submitted a proposal to incorporate the Earth Charter into its educational provision. As a result, a course was created as part of the Continuing Education Programme (*Programa de Educación Permanente*). The course is primarily designed to meet the life-long learning needs of educators and professors. The objective is to assist teaching faculty in recognizing the relevance of the Earth Charter to the educational process, to encourage them to develop course content inspired by the Charter's principles, to implement them in schools and evaluate their impact.

However, the proposal also recognized the fact that course participants could carry out their practice in non-formal, and even informal, educational settings. This is simply due to the fact that the Earth Charter provides a theoretical framework to achieve **educational objectives in three main interrelated areas:**

- a) To increase public awareness of the social, economic and environmental problems threatening the integrity of our planet.
- b) To create a common understanding among the world's population of the necessity to develop more sustainable ways of living.
- c) To promote a culture of collaboration and nonviolence, one which values and respects human dignity, environmental protection, social and economic justice, tolerance of diversity, and cultural and ecological integrity.

Objectives

The course objectives are based on three levels of student performance. The first aim is to provide a comprehensive overview of the Earth Charter. This is necessary in order to enable students to understand the Charter's role in the reflection and debate over its principles, and to view the document as a dynamic tool for building a global earth community. The second course objective is to focus on the basic principles and values that collectively shape the ethical code of the document. This knowledge is meant to enable the professors and course participants to gauge the relevance of the Earth Charter to their own pedagogical practice. Finally, the course is designed to lead to the development of creative proposals, incorporating the Charter principles into pedagogical practice.

Consequently, the concrete objectives set out for course participants are as follows:

- To become familiar with the values and principles of the Earth Charter
- To discover the value-added potential of the document for education for sustainable development, whether it be in academia, adult education, or other educational settings
- To develop a personal project or pedagogical model drawing on the Charter's values and principles
- To implement this project and evaluate its results

Content

The course syllabus is divided into two parts. First, the text of the Earth Charter is analyzed. Second, the course participants examine the methodological and procedural aspects required to plan and design educational projects. **The following topics are covered:**

Part I: 1. What is the Earth Charter? 2. Antecedents, influences and the process of constitution. Principles and objectives.

Part II: How can the Earth Charter be used as a pedagogical tool?: preparation of personal projects.

4. The basic principles from a methodological point of view. a) Knowledge creation from the learner's point of view. b) Learning as a process: the link between the intellect and emotion. c) Think globally, act locally. d) Context analysis. e) Realizing the vision: from theory to practice. f) Problem-solving. g) Developing a creative approach. h) Envisioning alternatives and decision-making processes: future scenarios.

Procedures

The above course content is based on the assumption that the participants, mainly comprised of working professors, have already attained a level of education enabling them to learn independently and to integrate new knowledge into their everyday professional lives. The course, one semester in duration, is designed to be delivered via distance learning. This pedagogical mode of delivery comprises three main elements: bibliographical resources; student assignments and activities; and, virtual tutorials.

Bibliographic resources

Basic texts are studied to meet the course objectives, including the Earth Charter and a series of complementary texts. These resources are listed in the appendix under 'Bibliography' at the end of this article.

Activities and assignments

Autonomous learning is one of the basic pillars of an effective pedagogical model, insofar as the teaching-learning process is concerned. It is for this reason that our course distinguishes between two types of learning activities. The first is obligatory, and sets out minimum criteria that are required to obtain a satisfactory result. The second is optional, and enables selected students to 'stand out' among their peers by deepening their knowledge or achieving outstanding results.

Compulsory activities, which are presented to the educators' team in an escalating manner throughout the course, enable the instructors in charge to guide or re-direct the educational process, whenever

necessary, and to monitor and evaluate student results. In addition, this serves as an endorsement of student performance upon graduation or completion of the course. **The mandatory assignments are as follows:**

- a) A report (eight to ten pages) synthesizing the most significant lessons learned from the basic texts studied during the first trimester of the course
- b) A practical project enabling students to apply their theoretical knowledge in real or simulated contexts. This activity takes place during the second trimester, and can be carried out in the form of three possible options

The first option is the design of an educational project whose implementation requires a minimum of two weeks. This practical experience should integrate the principles and values of the Earth Charter, irrespective of the selected educational setting. At the end, the student must write a memoir including a written self-evaluation of the initial plan, difficulties encountered during the process, results, suggestions for improvement, and the didactic materials used to implement the project.

The second option consists in analyzing an ongoing educational project through the Earth Charter lens. The aim is to re-think the project from this new perspective, and to incorporate those elements of the Charter that might enhance the project's capacity to contribute to the notion of sustainable development. In terms of measuring performance, the student is required to include in the memoir a critical analysis of the former project, to identify its deficiencies and weaknesses, and to submit a proposal for improving the underlying pedagogical approach.

The third option mainly caters to those students whose professions are not related to the field of pedagogy, and involves the preparation of a data bank through online research. The aim is to gather a repertory of resources available on the Internet

about the Earth Charter, and to combine this with a list of Charter-inspired initiatives spearheaded by NGOs, international organizations, charities, and others. The final report should reflect upon: the selection criteria of the registered resources, their general characteristics (e.g. target audience of funding sources, accessibility, type of information available, educational value, etc.), as well as the overall value of the resources on a global scale.

It should be noted that a number of complementary or optional activities have also proven to be highly effective in the teaching-learning process. These include synthesizing the content of each section of the Charter and preparing a glossary with the significant terms and concepts, creating a type of personal dictionary and encyclopedia on the topic at hand.

Virtual tutorials

The third key element to achieving success in distance learning provision is virtual tutoring. This serves as an important channel of student support throughout the teaching-learning process. Traditionally, tutorial services were only available via the post and telephone. In the case of the former, this implied limited access for those geographically displaced students, although the success rates in terms of student performance have been remarkable according to studies on the topic. Nevertheless, the growing spread of new information and communications technology has been the definitive accolade for experimenting with different modes of tutoring to maximize student support.

The Internet has paved the way for fluid, and in many cases synchronous, communication, even among geographically remote or dispersed students. Virtual tutorials could be an effective pedagogical tool to be included in instructional design, and are likely to become increasingly popular as the demands for more student-teacher communication continue to rise.

Epilogue

The UNESCO Chair of Environmental Education and Sustainable Development would like to conclude by adding to the sense of hope expressed so poetically in the final section of the Earth Charter:

Let ours be a time remembered for the awakening of 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.

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Becoming a Sustainable Campus: An Experience with the Earth Charter Community Summits

Andrew Robson⁶⁴

Introduction



Perhaps the most striking development related to the Earth Charter in the United States has been the emergence of Earth Charter Community Summits (ECCS; summits).⁶⁵ First conceived by Jan Roberts in 2001, there are now more than thirty Summits – local community gatherings – held in the US every October.

⁶⁴ University of Wisconsin Oshkosh, Oshkosh, Wisconsin, USA.

⁶⁵ Additional information about Earth Charter Community Summits can be found at: <http://www.earthchartersummits.org>.

The purpose of the summits is to provide an educational forum at which an array of speakers, performers, and community members can promote discussion, understanding, and action inspired by the Earth Charter principles. The summits are organized locally, and leaders involved in developing summits in their communities communicate via conference calls throughout the year, with many attending a retreat in Florida every January. To support the growth of community summits throughout the US, an independent, nonprofit organization called 'Earth Charter U.S.' was established. This nonprofit has been supporting the dissemination of the Earth Charter principles. Earth Charter Oshkosh, one ECCS community, based at the University of Wisconsin in Oshkosh, is an active participant in Earth Charter U.S. events, and is represented on the organization's Board of Directors.

Following the first Earth Charter Community Summit in Oshkosh in 2001, the Earth Charter was endorsed by all four elements of the UW Oshkosh's shared governance – faculty, students, academic staff, and classified staff. Top university administrators, including the Chancellor, also gave their enthusiastic support. This was the beginning of a significant re-focusing towards sustainability on campus and engagement with the wider community. Sustainability is now one of the university's "Governing Ideas," along with Collaboration and Engagement.



Earth Charter at University of Wisconsin Oshkosh.

Earth Charter Oshkosh ~ Earth Charter Community Summits

The main goals of our efforts can be summarized as follows:

- Development of the Earth Charter Community Summits as significant annual events
- Implementation of sustainability principles across the university and encouraging the same in the local community
- Fostering collaboration and good relations between campus and off-campus communities
- Establishing the UW Oshkosh as a national leader in responsible, sustainable practices
- Establishment of Earth Charter Oshkosh as a year-round presence in the university and wider community
- Integration of Earth Charter principles into academic areas and everyday life

Although revenue is often uncertain, the budget for Earth Charter Oshkosh has grown substantially over the years. Funds for Earth Charter Community Summit on campus and related initiatives have come from university student organizations, such as the Student Environmental Action Coalition, Campus Greens, International Student Association, and the American Indian Student Association; a number of academic departments; the Chancellor's funds; the Wisconsin Public Service Corporation (a utility company); and Johnson Controls, Inc., among others. Johnson Controls, Inc.⁶⁶ has also awarded a significant grant to help measure energy consumption and hire students to perform tasks related to this project.

On a much larger scale, University-wide projects, such as new 'green' buildings, have a major regional economic impact. They also provide for educational opportunities on campus and within the wider community. CASPER (described later in detail) and the Aquatic Research Centre have their own financial resources, as do university departments and student organizations. The financial affairs of Earth Charter Oshkosh are handled through the University of Wisconsin Oshkosh Foundation, a nonprofit foundation related to the institution.

⁶⁶ Johnson Controls, Inc. is a company leader in automotive experience, specializing in building efficiency and power solutions; it is based in Wisconsin, USA.

Earth Charter Oshkosh's ECCS has also continued to grow in size and scope. These events, sometimes lasting for one week, are useful to raise awareness and educate the university community, as well as people from surrounding areas. Members of Earth Charter Oshkosh, other student organizations, and academic departments, suggest names for speakers and other participants for the events. Many distinguished speakers from around the country have participated, and presentations have addressed the broad spectrum of Earth Charter principles, with some speakers focusing on matters of particular interest on the local and regional level. Drama, art, and music have also been featured during the summit. Past programmes are highlighted on the website: <http://www.uwosh.edu/earthcharter>.

The total attendance at Earth Charter Community Summit events is difficult to estimate. Almost all events are free and open to the public. Many students attend events, and in some cases event participation is linked to specific classes. We estimate that recent summits have attracted more than 1,000 people, and special events, such as an American Indian Powwow (2006) and environmental fairs, boost that number considerably. Every year, we try to include new events to attract more participants. In 2007, for example, two walk/run activities are planned, dedicated to diversity issues and to energy efficiency. In addition, Earth Charter Oshkosh collaborates with other student organizations for Earth Day (Earth Week) events and other activities throughout the year. We are also one of the hosts for an annual "Solar Olympics" event,

organized by the Wisconsin Public Service Corporation, and connected to the utility's "SolarWise for Schools" programme.

Related accomplishments and recognitions for sustainability efforts on campus

Although the concept of the UW Oshkosh being a 'green campus' is a new and (for some) surprising development, it has quickly become a key part of the university's public identity. A direct outcome of the first summit was the creation of a campus environmental audit, completed by students in collaboration with the Facilities Management office. Students earned college credit for participating in the audit and have had access to paid internships funded by a grant from Johnson Controls, Inc.; it is hoped that this project will be ongoing, but additional resources are needed. The Facilities Management office on campus created a "Green Master Plan" that is guiding the university and part of this plan involves achieving green standards in new building equivalent to the LEED "silver" rating.

Over the last few years UW Oshkosh has received national recognition for its energy and resource conservation projects. Recognition includes the 2003-2004 National Wildlife Federation Campus Ecology Recognition Award and the 2005 Energy Star Award for energy savings. In spring 2006, UW Oshkosh received the Wisconsin Clean Air Award from the Department of Natural Resources and the Wisconsin Partners for Clean Air. A few of these awards are associated with the university's commitment to steadily increase the percentage of our energy consumption that is derived from renewable sources (wind and biomass). This commitment is being achieved in collaboration with the Wisconsin Public Service Corporation, a regional utility company, through their "NatureWise" programme. In connection with this, the Governor of the State of Wisconsin has identified the UW Oshkosh as one of four campuses in the state to achieve 100% renewable energy within five years.

UW Oshkosh has also implemented a series of energy conserving building retrofits on existing buildings on



Exposition about alternative energy sources.

campus. Under a performance contract with Johnson Controls Inc., these have saved money on utilities and have reduced emissions related to climate change. The projects include energy efficient lighting retrofits, replacement of energy inefficient cooling equipment, installation of digital utility meters, installation of water conserving toilets and urinals, and the installation of control system upgrades. **Specific outcomes are expected, as follows:**

- Savings in utility costs of \$92,042 a year
- Reduced carbon dioxide emissions totalling 993,075 pounds per year
- Reduced sulphur dioxide emissions of 4,988 pounds per year
- Reduced nitrous oxide emissions of 2,583 pounds per year
- Reduced water consumption of more than 25,000,000 gallons per year

These improvements will be further augmented by the performance of the 'green' buildings currently under construction on campus, which will incorporate energy saving modern lighting technology, including natural light; water conservation and water catchment designs; the reuse of building materials from demolished buildings; and more. The campus is also reducing its use of non-organic pesticides and herbicides.

Academic engagement and methodological aspects of using the Earth Charter

The Earth Charter principles are reflected in a variety of academic activities, on- and off-campus. Among the off-campus activities is collaboration between biology faculty and local schools to test water quality in local lakes. A new UW Oshkosh aquatic studies lab is starting to serve area public schools, communities, and citizens. It will also be a centre for research on area waterways and will provide important consulting services in the Great Lakes region and beyond.

In addition, the University of Wisconsin Oshkosh College of Business launched a new initiative known as the Centre for the Advancement of Sustainable Processes

and Environmental Research (CASPER). Its vision is to become "a regional centre for sustainable supply chain and environmental excellence." CASPER is already engaging regional businesses in its programme, which also places trained students as sustainability consultants in commercial manufacturing operations.

On campus, the university's Chancellor has directed the formation of a sustainability team. Its purpose is to devise ways of integrating sustainability (in the broad Earth Charter definition) on campus, including in the curriculum, outreach, infrastructure, and food services. Among curricular activities, for example, a variety of academic courses are currently including references to the Earth Charter. **The following are brief descriptions of three such courses and their methodologies:**

Media Photography II

Students in the Media Photography II class, taught by Tim Gleason, are introduced to the Earth Charter through an assignment during the first week of the fall semester. Students are directed to the university's website to do research and background reading on the Charter. Afterwards they identify local problems and solutions, and estimate if they are 'photographable' – determining if a subject is an appropriate subject for photography. Students photograph their assignments and post the images online with captions. Two critiques are held: (1) an online written critique, and (2) an oral critique. The latter includes class discussion about how effective the photographs and captions were in



Photo from Student - Media Photography.

communicating the issues. Media Photography I students are directed to the Media Photography II website to view and learn from the projects and photographs posted on the Oshkosh Community News Network website to inform the network and encourage traffic back to the class website. Several photography instructors in other parts of the country have stated they are interested in participating in this programme in 2007. To see examples of the projects, visit: <http://uwomediaphoto2.blogspot.com>.

Environmental Studies Senior Seminar

Environmental Studies 261, "Environment and Society," taught by Jim Feldman, examines environmental problems from an international and comparative perspective. He introduces the Earth Charter as part of a discussion about the United Nations, and other efforts, to create a regime for the management of international environmental problems. He asks students to read the Earth Charter and explain how it fits into the established international framework, whose interests it represents, and who has signed it, among other questions.

Writing-Based Inquiry Seminar

Andrew Robson's section of a first-year course entitled, "Writing-Based Inquiry Seminar" (WBIS 188), uses the Earth Charter and sustainability as themes. He invites students to consider different world views, and to discuss and write about the Earth Charter's principles, their application on campus, in their local communities, in the nation, and in the world as a whole, as well as in their own lives. Readings and films relevant to the Earth Charter are used in class and are the source of further discussion, writing and research assignments. The scheduling of the class means it coincides with the Earth Charter Community Summit in October, an event that the students are required to attend. The summit events include scientists, activists, politicians, and others from local, regional and national arenas. People from diverse backgrounds put a human face on issues and offer real-world experiences to the audience, often encouraging

them towards involvement and action. Some guest speakers also visit classrooms, with students benefiting from a substantial period of question-and-answer time.

Professors in other departments have also incorporated the Earth Charter into their academic curricula, such as in Environmental Management, an upper-level Business Administration course that introduces the natural environment as a component of the business decision-making process. And faculty in the departments of sociology, social work, political science, music, English, and history have reported that they intend to do so in the future.

Lessons learned

Encouraging the development of Earth Charter Community Summits has been important for UW Oshkosh because it's raised the awareness of sustainability principles among the shared governance at the University, and encouraged the implementation of these principles on campus and in the wider community. The summits have also been the model for the student-organized Earth Week, mentioned earlier. Perhaps the most important outcome, however, is the complete integration of students, faculty, staff, and community members into the planning, promotion, and staging of the summit events.

Another useful and innovative aspect of the summits has been the live satellite 'round robin' linkup, used to bring people together nationwide during their own ECCS events. This was implemented most successfully during the summit in 2002, courtesy of an external grant from a Franciscan organization. Unfortunately, the cost was too burdensome for most local summits to pay in later years. The link has become web-based, but this has been less successful. Earth Charter US is looking for ways to restore the live satellite link and expand it internationally.

Many leaders across the university community have inspired UW Oshkosh to develop a sustainable campus, resulting in many promising developments: the

formation of the university's sustainability team; a campus environmental audit; the Green Master Plan; the implementation of energy and resource conservation projects; the construction of green buildings; projects to work on local environmental problems; CASPER; and the integration of sustainability principles in academic courses and programmes. The

Earth Charter Community Summits will continue to play a significant role in these developments, with particular emphases on education and outreach.

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Using the Earth Charter as a thinking
tool and a talking point:
**Reflections on environmental
education courses**

Lausanne Olvitt, Heila Sisitka and Ingrid Schudel⁶⁷



Introduction

Rhodes University in Grahamstown, South Africa, has been a 'hub' of environmental education, teaching and research in southern Africa since 1990 when the first Masters Degree in Environmental Education was established. In recent years, the Rhodes University Environmental Education and Sustainability Unit (RUEESU) has established an *Environmental Education, Ethics and Action research programme* which seeks to better understand the relationship between environmental education, environmental ethics and action. This research programme was established through the teaching of an environmental ethics module in the Masters Degree in Environmental Education (see Lotz-Sisitka, 2004) in which we collaborated with Bob Jickling from Lakehead University in Canada, and drew on the work of Johann Hattingh from the University of Stellenbosch in South Africa (among other resources).

⁶⁷ Rhodes University Environmental Education and Sustainability Unit, Grahamstown, South Africa.

In this research and teaching programme we articulated a theoretical framework for teaching environmental ethics which is based on an ethics-based epistemology, environmental pragmatism, situated learning and deliberations in socio-ecological context (Lotz-Sisitka, 2004). In teaching this module we found that we had inadequate practical tools for generating thinking and research into environmental education, ethics and action. This led to the design of a workbook with activities to support indepth engagement with environmental ethics issues in education (Jickling, Lotz-Sisitka, O'Donoghue & Ogbuigwe, 2006). This booklet is based on, and it sets out a methodology for engaging with, environmental ethics questions in education, which guides all of the teaching and research activities associated with ethics in education in the RUEESU. Its main contention is that there are many different ways of working with ethics and that "ethics is a *process of inquiry and critical thinking*, it is not about 'preaching'; 'indoctrinating'; or 'inducting' learners into 'rules of behaviour' or 'codes of conduct'" (Jickling et al, 2006:2).

This methodology has influenced our work with the Earth Charter as we have been reluctant to view the Earth Charter as a fixed 'code of conduct' or a set of 'rules' to govern behaviour, and we have had to examine our pedagogical practice critically and carefully to avoid 'inducting' our students into adopting the Earth Charter. We have also had to work at avoiding indoctrinating our students with the values contained in the Earth Charter, as this would be unethical, and would amount to little more than social engineering (which South Africa rejected with its new democratic dispensation in 1994). We discuss this further in the context of two of our adult education courses in which we have adopted a process oriented, critical thinking approach to working with the Earth Charter over the past few years in accordance with this methodological framework. In both cases, the Earth Charter has been used in small but effective ways as a 'tool' to stimulate deeper and more careful thinking about environment and sustainability concerns, to promote critical thinking and to help make connections between global initiatives (such as the Earth Charter) and local environmental education practice.

Working with the Earth Charter in the Gold Fields Participatory Certificate Course

The Rhodes/Gold Fields Participatory Certificate Course in Environmental Education is a 10-month, part-time course for South African educators working in a range of settings, such as school teachers, community development officers, conservationists working at the interface of rural communities and conservation projects, and municipal managers needing to address public health and sanitation issues related to water provision, among others. As an introductory course in environmental education, it guides students firstly to investigate local and global environmental issues and risks and, secondly, to think critically about the educational orientations and methods currently being used to educate others about these concerns. Within the course curriculum, the assignments were developed to be as relevant as possible to each student's workplace, so that the knowledge, skills and values developed through the course have direct application to the organisation or community where the student works. The course orientation also emphasises active participation and the significance of history and context in educational processes. It thus encourages students to bring forward rather than deny their own cultural and political orientations, historical influences, values, ethics and priorities, so that they can be re-examined through (but also in relation to) the course deliberations.

Students meet in small regional tutorial groups every six to eight weeks to share ideas, discuss the course readings, and to receive support for the four assignments that make up the final Portfolio of Assessment. The second of these assignments requires students to begin by reviewing the policies and principles of their organisation in terms of environmental and educational practice. This is a valuable exercise for most students who might otherwise not get to take a critical look at their organisation's mission statement or vision, or the detailed policies that guide it. After this exercise, students are introduced to three different sets of international guiding principles of relevance to environmental education: The Tbilisi Principles of 1977, the NGO Forum Principles of 1992, and the Earth

Charter. All three sets of principles are included in the course materials and are discussed in a tutor-led session. By introducing *three* sets of principles, students are immediately confronted with the need to assess these, deliberate them in relation to each other and in relation to their own organization. This provides a mechanism for fostering *critical thinking* when working with the Earth Charter, and avoids 'induction' or 'indoctrination' as outlined earlier.

The follow-up assignment requires students to select one of these documents and consider it more carefully in relation to their workplace: "Discuss how these principles could be used to strengthen the work of your organization. Explain clearly **why** you believe they are significant to your work."

In the 2007 revision of the course we have loosened-up the focus of the assignment by asking the students to select any guidelines or principle documents which they consider significant in their work. This was done with the intention of placing more responsibility on students to seeking and selecting policies, principles and guidelines of most relevance to their own work instead of having to work with only three sets of principles that have been pre-selected by the course developers. The assignment now requires them to identify such a set of principles. **The following are the guiding questions posed to students:**

1. Which other guidelines (examples might be the Millennium Development Goals, Agenda 21, the Earth Charter, the Decade of Education for Sustainable Development implementation plan etc.) are relevant to environmental education in your work context? What do they say you should do?
2. Which ethical frameworks or values should apply to your work, in your view? Are there any tensions between these and the policies/guiding frameworks described earlier?

Here is an example from one student's assignment in which he begins to show evidence of making connections between the principles of the Earth Charter and his own work in a government

programme on forestry, alien plant clearing and community development:

In our work we teach our workers to respect earth and life on it in all its diversity, to secure the present resources for the future generations, and to protect and restore, where possible, the integrity of the ecosystem. All herbicides we use won't harm the environment or the lives of any species, which might come in contact with it, but only the plants it was designed to target. Best operating practices are set in place and are monitored very closely.

Reflections on working with the Earth Charter in this way suggest that, especially at the undergraduate level, it may be more beneficial to ask students to select only one of the Earth Charter principles and analyze it in terms of its relevance to their work/community context. By reducing the scope in this way, the depth of analysis might be increased and students will need to replace generalized comment with more specific analysis.

Working with the Earth Charter in the Advanced Certificate in Environmental Education course

The second environmental education course at Rhodes University in which the Earth Charter has been used is the Advanced Certificate in Environmental Education. This is a full qualification for educators already in possession of a three-year professional qualification (such as a teaching diploma, nature conservation diploma, BSc. Degree, etc.) wanting to specialize in environmental education. The course is offered part-time over two years with students having to attend 10 contact sessions of five days each. Between contact sessions, students work on a series of assignments and a small-scale action research project. Similar to the Rhodes / Gold Fields Participatory Course in EE, the curriculum of the Advanced Certificate Course is designed to be practice-based, responsive and relevant to each student's unique work context. The course orientation also emphasises the fostering of critical thinking skills, active participation and improved professional practice among environmental educators.

In this course, the Earth Charter is used *as an ethical lens for exploring contemporary issues* with students. A typical exam question at the end of year one of the Advanced Certificate Course, which requires students to reflect critically on the Earth Charter, is as follows:

Analyse one of two issues:

Agribusiness, Biotechnology and Food Security

OR

Landscape Change and Biodiversity Loss

- Identify how this issue manifests in your local environment, by giving an example of these problems in your local environment.
- Discuss the current status of the issue in your own country (this can include regional and national perspectives).
- Discuss the significance of this issue at an international level.
- Comment on the relevance of the 16 principles of the Earth Charter to the issues emerging from your discussion.

And from ACE (EE) Module 3:

Consider the principles and value orientations of the People's Earth Charter. How will these influence your choice of environmental education methods and approaches?

These assignment briefs show how the Earth Charter can be used as a reflective tool. It provides capital to critically reflect on contemporary issues, and pedagogical processes in education. The case shows how the course tutor avoided simply 'inducting' learners into the contents of the Earth Charter, or from 'indoctrinating' learners into the values of the Earth Charter, but rather expected learners to consider the ethical framework provided by the Earth Charter and its implications for engaging with environmental issues, and for teaching practices in environmental education.

Lessons learned and challenges

In the case of both courses described here, the curricula are very full and time is always a major limitation to discussions and to the extent of students' reading. Consequently, discussions seldom get to the depth that course developers and tutors anticipate. The Earth Charter alone can easily generate a day's worth of activities and discussions, but when it is one document among several, within a much wider course that also includes modules on teaching methods, educational materials, assessment, and so on, it becomes difficult to dedicate that time only for the Earth Charter.

However, as the Earth Charter covers such diverse aspects (from the knowledge systems and rights of indigenous peoples to principles of ecological integrity) that we, as course developers, are challenged to rethink how, in future courses, it might be possible to weave the Earth Charter like a strand through several other modules of the course, thereby deepening students' engagement with it in various ways at different stages of the course.

We are also considering in more depth how we might encourage our students to explore these dimensions of working with the Earth Charter: "What teaching orientation(s) might complement the ideas contained in the Earth Charter?" and "What teaching methods and activities could be relevant in your work context?" We think these might provide additionally useful starting points for considering environmental education, ethics and action. We also think that the Earth Charter could again be critically re-examined in the courses, this time from the perspective of policy formulation and implementation. These are some of our reflective ideas after our three years of experience of working with the Earth Charter in adult education courses.

As shown in these cases, we have, primarily, used the Earth Charter to foster *critical thinking* about environmental ethics questions as they relate to organizational strategy, environmental issues and pedagogy. We have identified the potential to further

this *critical thinking* in relation to policy analysis and teaching methods. In this sense, it has been used to encourage critical engagement with dominant ideas and ethical perspectives in the field of environmental education and in society in general, and to seek contextual relevance and opportunities for application in educational practice.

We have found this approach to the Earth Charter to be successful as we have managed to avoid 'induction' and 'indoctrination' approaches to working with codes of ethics such as those represented in the Earth Charter. In returning to our methodological framework provided by the *Environmental Education, Ethics and Action workbook*, we can still do more to consider how the Earth Charter might be used to strengthen environmental ethics *processes* such as ethical actions and practices.

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Earth Charter Project... in Motor Action

Francisco Lagardera Otero⁶⁸

Introduction



This is the story of one dream, five miracles, and a project – to use the values of the Earth Charter as a unique reference point, as a starting point and final objective.

All nations on the planet enjoy a valuable repertoire of traditional games, dances, and other elements of physical culture. Dating back thousands of years, many of them were used – and are used still – to celebrate numerous social occasions and notable circumstances, such as the harvest, sowing time, solstices, weddings, births, thanksgiving and rites of passage, among others.

⁶⁸ National Institute for Physical Education of Catalonia, Spain.

The meaning and purpose behind these celebrations is easily connected with the different values encompassed in the Earth Charter; in this sense, it is not impossible to incorporate these hobbies and rituals into the Charter – this wonderful *tide of hope* and excitement; this declaration of a sustainable, peaceful, and just world.

The dream is that one day all the children of the world will start their school day by showing their appreciation of life through singing, dancing, and playing cooperative games. In the dream, they celebrate being alive and being a part of Gaia – the living earth – by gathering each morning to participate in an active ritual, typical of the physical culture of their own country.

The first *miracle* that happened to help make this dream come true took place during the summer of 2006, when a good friend gave me a wonderful book, “The Earth Charter in Action: Toward a Sustainable World” (Eds. Corcoran et al, KIT Publishers, Amsterdam 2005),. I read it and was captivated by this great, appealing ethical vision.

By September 2006 I went before the Group of Praxiological Studies of the National Institute of Physical Education of Catalonia (INEFC) at the University of Lleida, and presented a proposal to design a descriptive catalogue of traditional games, dances and physical exercises from a scientific perspective. It would be designed using motor praxiology – the science of motor functions – in congruence with the values contained in the principles of the Earth Charter. The idea was to design a game, dance or physical exercise in connection to a specific Earth Charter value, so that when executed, it might be capable of activating the value within the participants – simply by playing them out.

The project was received with enthusiasm by both professors and doctoral students from the research group, and so it became the star project for the 2006-2007 academic year.

The *second miracle* began during the first session of the 2006–2007 academic year through the Governing Coordination Body of the INEFC of Lleida, when there arose the need to design a project for a Masters’ Degree

Programme and an official PhD course for that year. It was suggested that the project be called *Earth Charter in Motor Action* and be designed for a Masters’ Degree Programme that would have ‘Sustainable Sports’ as its thematic axis. A draft was drawn up to further develop this idea which was later accepted by the University of Lleida. Finally an official Masters’ Degree Programme on Sustainable Sports and Wellbeing was approved by AGAUR, the Catalonian agency for universities and research.

The *third miracle* was the insertion of the Earth Charter into the project. The basis for *Earth Charter in Motor Action* was shared during the Tenth International Seminar on Motor Praxiology held in the city of Vitoria in November 2006, with researchers, professors, colleagues, and laboratory personnel in attendance from Spain and other countries, including France, Portugal, Argentina, Chile and Brazil. We received an enthusiastic and committed response from everyone to actively contribute to this project. In order to provide an opportunity for wide involvement of universities and individuals, a section entitled, ‘The Earth Charter,’ was added to the website, www.praxiologiamotriz.inefc.es. Currently the laboratories and research groups mentioned above have begun working as a network. We believe that this is necessary – a contribution to the collective process heralded by the Earth Charter to look towards a new horizon for life on Earth.

The *next miracle* was the pedagogical experience that we obtained and shared throughout the process of



Presentation of the project - POPBL.

developing the project. We shared the goals of *Earth Charter in Motor Action* with University of Lleida students, particularly within the INEFC. During the 2006–2007 academic year, 120 second-year students prepared a social intervention project based on motor practices, which implemented the Earth Charter principles.

This project involved the subjects of Cooperative Games, Dance, Sociology of Sports and Research Projects II (PI-2), culminating in a celebration – a large, collective event on 26 April 2007 at the Mitjana Park by the Segre River. At this event, the university students, together with grade school students, the disabled and the elderly (some 400 people), put their bodies into action, in movements designed and practiced as testimony that it is feasible to celebrate the party of life in an active, cheerful, and playful manner.

Finally, the *fifth miracle* occurred when the INEFC joined the Earth Charter. In May 2006, the Governing Body of the Centre of INEFC in Lleida, in which all professors, students, and service and administration staff are represented, unanimously approved endorsing the Earth Charter as a “document for teaching and disseminating sustainable sports, within the academic and scientific activities and programmes organized by this centre.”

The Earth Charter in Motor Action project

In a more precise description, this project intends to: select, within the realm of motor action (homogenous groups of motor activities); seek, within the world's ludic heritage; and design (or create, if necessary) motor activities such as games, exercises, and dances, coherent with the values stemming from the sixteen principles set forth in the Earth Charter. The goal is to provide a ‘motor inventory’ of activities that can be put into practice simply and efficiently by any person, regardless of age, gender and culture. This project is organized in three phases:

Phase One

This is an ongoing phase to design and create a practical programme, capable of activating, in an

entertaining fashion, all the values embedded in the Earth Charter. As a complement of this phase, a series of teaching experiences have been held at the INEFC and in the city of Lleida during February, March and April 2007, in which the final outcome was the collective celebration that took place at the Mitjana Park in April 2007. These experiences will continue in the years to come, as once this programme of games and dance is finalized, between September–October 2007, we expect to put it into practice in the various social settings in the city of Lleida, including schools, institutes, educational institutions for the disabled, and homes for the elderly.

Phase Two

This phase is the creation of a database of movement activities related to the Earth Charter, through which we will make possible a direct access to games, dances and physical performances that implement the Charter's values to the whole human community. These activities will have been previously analysed and selected by qualified personnel from the Motor Praxiology laboratory of the INEFC in Lleida.

The conclusion of this phase is expected in the year 2010. To date we have produced a descriptive record card for data collection to enable, through the Earth Charter section of the virtual document centre www.praxiologiamotriz.inefc.es, any individual or institution to make an active contribution by sending



After each activity, and assessment of the impact of each teaching activity is done.

games, dances and motor activities they deem suitable, taking into account the conditions stated in the guiding record card. The record card has been created so that someone without knowledge of motor praxiology may be able to adequately complement the information posted. All contributions are welcome.

Phase Three

In this phase we engage in the application of motor conduct pedagogy, in the hopes that this teaching strategy may pose an authentic revolution in the teaching of physical education. This project is determined to design a descriptive catalogue of sustainable and innovative motor actions so that teachers, using this support, may be able to evaluate the process by which students gradually modify their motor conduct to include the values in the Earth Charter. This phase will start upon conclusion of Phase Two.

Methodological aspects of the experience with Phase One of the project

Interaction between teachers and students

For one day, university students, elderly people from the municipal centres, professors and students of the Compulsory Secondary School system (ESO), people with cognitive disabilities, environmental technicians of the City Council of Lleida, university professors,



Earth Charter in Motor Action at the Mitjana Park.

and politicians joined together in search of a common objective: *To promote and disseminate the values contained in the Earth Charter*. The challenge we posed to our students was to reach this objective through motor action, which we are all so passionate about. Dance, traditional games, cooperative games, and expressive motor practices were our motivation for acting and reflecting on sustainability and respect for diversity.

We managed to involve a large number of people in the process: First, we started with three groups of 40 second-year students of the honours degree in Science of Physical Activity and Sports, and three professors (playing the role of tutors-facilitators) of the INEFC-University of Lleida, who proposed a project methodology organized as a learning experience based on problems (POPBL). Students worked in groups of five, with different roles to encourage cooperative work. Boys and girls from the Lestonnac School in Lleida were also involved, as were groups of disabled and retired elderly people – happy to be taken into account – from municipal care centres in the city. INEFC professors from different subjects played the roles of ‘advisors,’ and worked closely with the student groups to organize tasks and develop evaluation tools to be used.

The Environment Council of the City Hall in Lleida has provided support to the project since its inception, contributing knowledge, coherence and expertise in organizing events.

Description of the learning approach: content and methods

In harmony with the changes proposed by European Universities (EEES) for 2010, we have attempted to develop the cross-cutting competencies for teamwork, critical and reflective thinking, autonomous work planning and organization, and the capabilities for verbal and written communications. The Tuning Project and the Berlin Indicators are solid proof of the significance the University grants these competencies within the concept of life-long learning for professionals.

The Earth Charter has become the perfect framework to encourage discovery and passion in our students. In addition, this powerful tool allows us to tell society that we are interested in transforming motor action into a means of educating about values of prime importance – those values set forth in the Earth Charter.

Using methodologies focused on student learning helps us connect with a real context, and provide training in professional areas. It helps us consciously evaluate the learning process, while simultaneously aiming for a final result. Organizing the project and turning the ludic educational programme into an authentic evaluation tool for the acquisition of competencies. It also helps us establish a closer relationship with society, recognizing that our professional work will always be determined by our knowledge of our surroundings and the individuals to whom we address our interventions. These methodologies allowed for the students' involvement in the entire learning process, including the evaluation, since it was the students themselves who designed the criteria and – based on these – selected the activities to present on the day of celebration.

The project calls for the incorporation of knowledge acquired during the first cycle of their educational programme, and 'new' knowledge, such as the Earth Charter values, on which they have to do research, requiring analysis, synthesis and assessment. It is important that students learn why something is essential, and be able to make an argument and defend their reasoning, as well as learn to work with their peers and others from all walks of life in natural environments. Showing that education is our most valued treasure allows us to bring about transformations in learning – education that touches all of us, from politicians to schools involved in a learning community. Within the various expressions of physical and sporting activities we find a true uncut diamond.

Lessons Learned

The experience of having our dream become a project - the Earth Charter in Motor Action - has borne fruit and important lessons. It has given us confidence in our capabilities and efforts to bring this project to fruition, although we recognize that we need everyone's help to complete the project's phases, since every person can contribute actively to making this dream-project a daily reality. Motor action has already started becoming a transformer of life on this planet, by placing wheels on this great vehicle, the Earth Charter.

With regard to Phase One of this project, we can state that it has already been successful and we hope it will continue to be so. The best assessment of our efforts, however, is that José María, one of the boys with cognitive disability who participated in our April 2007 celebration, continues to water the plant that he placed in the ground that day and pamper it with affection, as he waits impatiently for next year to come...

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The Earth Charter in the Classroom: Transforming the Role of Law

Prue Taylor⁶⁹ and Klaus Bosselmann⁷⁰



Introduction

This is a short case study on the educational use of the Earth Charter at the University of Auckland, New Zealand at the undergraduate and graduate levels within two different schools. The first section describes how the Charter has been used in courses taught in the School of Architecture and Planning, by Prue Taylor, a senior lecturer in environmental and planning law. The second section describes the use of the Charter in courses taught in the Law School, by Professor Klaus Bosselmann. In both instances, students are enrolled in law courses, however the qualifications they are seeking are different. In the former case, the degrees sought are in environmental management and urban planning, and in the later case, in law.

⁶⁹ School of Architecture and Planning, University of Auckland, New Zealand.

⁷⁰ School of Law, University of Auckland, New Zealand.

Prue Taylor and Klaus Bosselmann have had a long commitment to the Earth Charter. Using it in their courses reflects deeply held views that incremental 'business as usual' will not deliver the necessary degree of change needed for the interrelated ecological and social issues facing the world, nor will it achieve a just and sustainable global society. The Charter is used to challenge students to consider the interdependence of human existence on Earth, and role of ethics in driving human behaviour and shaping (reshaping) the structure and content of governance and legal systems.

Courses in the School of Architecture and Planning

In the New Zealand legal system, urban planners are the primary resource managers. This means they both design policy and law, and implement it through regional and local plans for integrated land, air and water use. Planners are also involved in the implementation of local government legislation intended to meet the broader sustainability goals of local communities. For this reason, planners are required to take a number of compulsory courses in law and governance.

The Earth Charter is explicitly used in two of these compulsory courses: Introduction to Planning Legislation and the Legal and Institutional Context of Planning. Both courses are introductory and deliver an overview of relevant content, but they do so from a critical point of view. That is, students are required not only to acquire substantive knowledge, but to also exercise skills of critique in respect of substantive knowledge.

Both courses contain a module on the role of environmental ethics. The purpose of this module is to look at the underlying causes of ecological degradation, and the current destructive ethical paradigms that are a major driver. This module progresses to consider alternative worldviews and ethical principles, and how these can be promoted through both domestic and international legal frameworks. It is at this point that the Earth Charter proves to be an invaluable tool for class discussion and individual discovery.

Students are provided with copies of the Earth Charter and information about its inception, the comprehensive

drafting process and its subsequent endorsement. Class discussion then focuses primarily upon the first four broad commitments, which fall under the heading of "Respect and Care for the Community of Life." Generally speaking, there are three related outcomes from class discussion.

First, many students are already aware of the dangerous contradictions inherent in our current value systems. Class discussion gives them the opportunity to articulate these views and to consider the depth of change needed in human society. There will be no quick fix, rather human social and economic systems need to be rebuilt upon a shared responsibility for the community of *all* life (human and non-human).

Second, while the magnitude of this change can seem overwhelming in the face of entrenched interests, there is significant cause for hope in the form of the Earth Charter itself, the Initiative that promotes it, and the level of recognition achieved by the Charter, since its launch in 2000. Many students experience a sense of solidarity and affirmation, stemming from the Charter and the global dialogue that it is a part of.

And third, for law to play a constructive role in halting ecological degradation, it must transform from being an instrument for the exploitation of Earth's ecological systems and its vulnerable peoples, to be reflective of an ethic of care and respect.

In addition to the above courses, the Earth Charter was used as an important educational tool in another course: Climate Change and Planning. The purpose of this course was to first raise awareness of climate change and its multiplicity of related causes, and to consider the appropriate scope and range of planning responses. As will be explained below, the Charter was used in a slightly different manner, but built upon its use in the compulsory courses described above.

The climate change course began with the students viewing and then analyzing Al Gore's movie, "An Inconvenient Truth." This analysis was based upon the integrated approach of the Earth Charter, linking social, economic, cultural, spiritual and ethical causes of climate change. In this manner, students were able to

identify the significant limitations inherent in both the movie's discussion of causes, and its identification of appropriate responses. This discussion helped students understand that climate change is not about greenhouse gases and their reduction. Rather, climate change is symptomatic of a fundamental imbalance in the human/nature relationship.

In addition to the class discussion, students were asked to write evaluations of "An Inconvenient Truth." A large number of students referred to the moral assertions made by Al Gore (i.e. that climate change is a moral issue) and then linked this back to previous class discussions based on the Earth Charter. The result was a much deeper and interconnected understanding of the changes needed. And something more was also achieved; a number of students identified how this deeper understanding translated to motivate individual actions. As one student noted (and many echoed), they now understood that taking constructive action was no longer a matter of individual choice but a moral responsibility, owed to current and future generations of humans and other living beings both in New Zealand and in other parts of the world.

Furthermore, and of no less importance, was the understanding that actions should no longer be justified solely by criteria of self-interest, as this would limit the scale of actions taken. For example, reduced electricity consumption leads to saving money on power bills. Similar savings could not always be expected as a result of using public transport or purchasing locally produced goods. The extra costs associated with these actions were not used to justify inaction, but were accepted as the current price of acting in a morally responsible manner.

Such shifts in the behaviour of students may seem small, but when multiplied (in whole or in part) across a class of fifty-five students, the cumulative impact is both exciting and dramatic. Of course, the real challenge is to make value and behavioural changes enduring. Even taking this into account, the Earth Charter, and "An Inconvenient Truth," came together in this course, to mutually reinforce one another and create a powerful impetus for ethical action on climate change. This convergence certainly

provided all involved with a valuable and rewarding learning – and teaching – experience.

Courses in the School of Law

Within the suite of environmental policy and law courses, the Earth Charter is also used at undergraduate and graduate levels. International Environmental Law is a course in the Bachelor of Laws programme that provides an introduction to the concepts, principles, customs and treaties of international law that relate to protection of the global environment. In this course the Charter is introduced as part of a discussion on international treaties and agreements. Students learn about the Charter's unique history, inclusive nature and importance. This provides a context for understanding the strengths and weaknesses of existing treaties (for example, the United Nations Convention on Biological Diversity), and for understanding issues concerning the design and scope of future international legal and policy frameworks. Students learn to identify failures and gaps in the existing system of international law and to apply ethical and conceptual reasoning to the design of future law.

The Law School also offers a graduate course entitled Earth Governance. Its purpose is to examine existing governance models and practices with a focus on their capacity to provide for long-term sustainability. One of the key issues is the tension between democratic traditions and ecological principles. The Earth Charter offers an important learning experience, enabling students to think holistically and identify relevant ethical and legal issues for the attainment of a sustainable future. Students find that they can directly use the Charter as a blueprint for multi-level governance in pursuit of a sustainable and peaceful world.

The Earth Charter is also used in a number of other law courses including international law, jurisprudence and environmental law. It is of particular importance for research at the post-graduate level where students explore the legal significance of the Earth Charter in the context of principles and instruments of international law. Such research ranges from short research papers to Masters theses, doctorates and post-doctoral research.

The World Conservation Union's (IUCN) Academy of Environmental Law recently recognized the importance of Earth Charter-related research by adopting a research agenda that includes exploring the use of the Charter, and its principles, for the development of new jurisprudential foundations for entire legal systems.

* * *

In sum, the Earth Charter has proven to be a formidable learning tool in legal education at the University of Auckland. There are a variety of uses (from learning about ethics to comprehensive legal research) at all levels of legal training (from year one to post-doctorate studies). In most cases, students show an instant appreciation of the Earth Charter's purpose, values and principles. They obviously resonate with widely held beliefs.

The real challenge, however, is to understand their practical relevance. How can the Earth Charter be applied to law? What is its current status in international law and what degree of legal recognition exists for its principles? Further, how can the Earth Charter influence international, national or local decision-making? What political and legal measures are needed to make this happen? These and other questions can all be addressed in the course of legal training and indeed must be addressed.

If the Earth Charter has a key educational function, it must pass the test in the classroom and in the training of future leaders. For us, introducing the Earth Charter to our students has been the most rewarding experience of our academic work.

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Sustainable Education in Russia: The Experience of the Mendeleyev University of Chemical Technology

Dr. Sc. Natalia P. Tarasova⁷¹ and Dr. Sc. Valentin A. Zaitsev⁷²



Introduction

The urgent need for re-orientating this generation's lifestyles underlies the importance of the humanistic and ethical components of the whole framework of education for sustainable development (ESD).

The National Sustainable Development Strategy of the Russian Federation stresses that "...the greening of human conscience and ethical principles and radical reorientation of the whole system of education and training toward sustainable development principles must prioritize intellectual and moral values over material values."⁷³

The Russian Ecological Doctrine also stresses the need to develop new educational standards that promote basic principles of national sustainable development.⁷⁴

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⁷³ "National Sustainable Development Strategy for the Russian Federation." Moscow, 1997.

⁷⁴ The Russian Ecological Doctrine represents the official view on the principles, main priorities, and means to promote sustainable development in the Russian Federation. The Doctrine provides the basis for the Russian State's ecological policy.

In the sphere of *public education*, ESD focuses on introducing knowledge and skills that encourage harmonious relations between humankind and nature. *Life-long ESD* provides necessary conditions for the creation, functioning and further development of the whole system of general public education at all levels: pre-school and kindergarten, primary and secondary school, higher education, life-long professional training, nonformal education for local communities and, finally, informal education for the mass media.

The methodology adopted by the Russian educators who are engaged in promoting ESD in the country is based on the following **principles**:

- Variety of forms and methods of education and upbringing
- Interrelation with other education programmes
- Programme continuity at different levels
- Adaptability
- Consideration of local conditions
- Inseparability of general, professional and environmental education
- Practical activities

The higher education system for engineering in Russia is undergoing a transition to a new educational paradigm - the professional training of future specialists in a holistic manner. Addressing the need for sustainable use of natural resources, energy conservation, environmental protection, prevention of technological accidents, and risk management requires



Mendeleyev University of Chemical Technology of Russia organize the first international conference on Chemical Education and Sustainable Development.

the active participation of engineers, with their particular knowledge and skills. Hence, the goal of education must be training specialists within a holistic life paradigm, so that they can be responsible citizens. The special role of engineer-chemists should be mentioned, because environmentally friendly technologies and green chemistry could greatly help in the transition to sustainability.

During the former Soviet Union's period of industrialization and construction of a centrally planned economy, higher education in engineering was subject to quite strict state control over the content of curricula, the style of teaching and the structure of education in general. The indepth specialization of graduates and their placement in jobs was the responsibility of the state ministries and the higher institutions themselves. Such an approach resulted from the fast growth of industry and the beginning of the Cold War. The goal was 'victory at any price.'

In today's modern world, it is quite obvious that such an approach cannot be put into action and would lead nowhere. The strategy of sustainable development is the only viable alternative. New techniques and technologies in all branches of material goods production make it evident that the role of engineers is becoming even more important.

Engineers trained in a systemic and holistic manner can become change agents in the practical implementation of the concept of sustainable development. The leading technical universities in Russia are steadily moving in this direction.

At the secondary school level, in order to achieve success in sustainable education, there is an urgent need for education programmes based on sustainable development curriculum for use in teacher training. Such training will allow teachers to use interdisciplinary approaches to integrate sustainable development principles into the different subjects of the formal school curriculum.

Sustainable education at all levels – life long, informal and nonformal - should also be available to all citizens

of the Russian Federation in order to achieve a more ambitious goal: the transformation of the mainstream lifestyle of unsustainable consumption and production to a sustainable way of living. This can be done through public lectures, the creation of new learning centres, seminars and workshops, mass media such as TV and radio programmes, and audio-visual means, as well as local and national roundtables and conferences.

The research, development and industrial implementation of new 'nature-friendly' technologies is one of the most significant components of the whole system of sustainable education.

Education for Sustainable Development at Dmitry Mendeleev University

I. ESD in Russia

The advance of education for sustainable development in Russia builds on the efforts of environmental education, which constitutes the major part of ESD in its best methodologies and forms. The 'greening' of the higher technical education in the Soviet Union began in 1983 at the then Moscow Mendeleev Institute of Chemical Technology, with the initiative of its rector, the future Minister of Education and academician G.A. Yagodin, who founded the Department of the Industrial Ecology.

In order to bring the knowledge of sustainability into the world of professional engineers, the University became the first school in Russia to organize a Department for the Problems of Sustainable Development in 1995 and, in 2000, the Institute of Chemistry and the Problems of Sustainable Development at the Dmitry Mendeleev University of Chemical Technology was established. This unique educational institution includes:

- The College for Rational Use of Natural Resources
- The Department of Sociology
- The Department of Risk Assessment and Risk Management

- The Department for the Protection of the Producers' Rights (dealing with legislation of chemicals, the chemical industry, and environmental regulation).

All technical majors in environmental protection at the Institute for Problems of Sustainable Development are grouped under the umbrella of the Department of Environmental Protection. In compliance with the recommendations of the international conference "Environmental Chemistry," "Environmental Engineering" is now a compulsory course for all future engineers.

The Educational Department of the Institute has developed programmes and specialized courses, such as "Development and Natural Resources," for its students, who are studying to become chemistry teachers in the near future.

II. The experience of integrating ESD into higher education

Since 1995, two compulsory courses on sustainable development, "The Problems of Sustainable Development" and "Industrial Security and Risks" have been included into the curricula of all departments and institutions of Dmitry Mendeleev University.

Since the year 2000, several summer schools have been organized at Dmitry Mendeleev University to update young university faculty on innovative pedagogical methodologies. The attendees were presented with programmes in such subjects as sustainability, democracy and justice, the goals of sustainability, the reorientation of existing education towards sustainable development, and the best pedagogical practices and experiences at the international and national level.

The Department of Environmental Engineering at the University organizes scientific-practical student expeditions that seek to provide students with practical knowledge of education for sustainable development. These expeditions have been very successful, and the results of several were

presented to the Russian State Committee on Nature Protection, and included in the National Report "Lead Pollution of the Environment and its Influence in Public Health" (1997). In recent years, some of them have also been sent out to the regional committees of the Russian State Committee on Nature Protection.

In April 2007, the Academic Council of the Institute of Chemistry and the Problems of Sustainable Development at Dmitry Mendeleev University approved the professional oath that each graduate of the Institute is expected to take during the graduation ceremony, starting with the 2007–2008 academic year. The text of the oath is built on the main principles and values of sustainability.

III. Helping integrate ESD in secondary education

In addition to its ESD activities at the higher education level, Mendeleev University set up a long-term patronage programme to promote education for sustainable development in secondary education by creating centres of environmental monitoring in secondary schools and colleges in various parts of the country.

From 1991-1993, in Moscow and Tomsk (Siberia), the professors of the Department of Sustainable Development of the University developed and held a series of workshops and seminars on global issues related to sustainable development. As a rule, these

seminars were held during the summer and winter school holidays, and autumn and spring breaks. The duration of each workshop varied depending on the individual requirements of each group and the level of their preparedness. Among other topics, such issues as environmental protection and its relation to poverty, and examples of unsustainable economies and poor environmental management were addressed. As the result of this sustained effort, ESD practices and methodologies became an indispensable part of the educational process for every teacher, faculty member, and student from Tomsk Municipal College who took part in these workshops.

The creation of the Centres for School Environmental Monitoring turned out to be one of the most effective tools for the integration of sustainable development issues into the formal and nonformal educational process in secondary education. These Centres provide college students (15-18 years old) with the opportunity to carry out systematic, scientific research by working on various projects. The programme is developed with consideration of the educational and psychological levels of students' development. The experience of the first Centres for School Environmental Monitoring and the information gathered by the University was very useful for further expanding this programme. For the last several years such Centres were organized in several Moscow schools.

IV. Professional training for sustainable development

The University's experience in convening ongoing training seminars and workshops on environmental management was incorporated by the Government of Moscow. In late 1999, the Moscow Government issued Decree N990, in which both environmental and sustainable development professional training were pronounced compulsory for professional and business managers at all levels.

In accordance with the Decree, the University, as a member of the Moscow Association of Environmental and Sustainable Development



On the century-old grand University staircase. The famous students choir.

Education, provides professional training by giving the course "Environmental Protection at Industrial Enterprises." Since 2000, about 1,000 representatives from various plants and factories in the Russian capital have received this training.

V. Regional activities: Promoting ESD principles among Russian educators

The Director and faculty of the Institute for Chemistry and Problems of Sustainable Development at the Mendeleev University have developed a programme for the promotion of sustainable development at the regional level. They created a partnership with the Inter-Regional Association for Economic Cooperation of the Subjects of the Russian Federation, called "The Siberian Agreement." This Association constitutes an NGO that brings together nineteen regional subjects of the Russian Federation. The Association focuses its activities on life long environmental and sustainable development education, raising the awareness of the broader Russian public through formal and nonformal ESD.

Week-long training courses were held in various Siberian cities – Tomsk, Krasnoyarsk, Novosibirsk, and others. The courses were held by professors of the Institute headed by its Director; they were mainly focused on secondary school teachers and university professors, although, on one occasion, Professor Tarasova's audience were kindergarten teachers.

The Institute for Problems of Sustainable Development at the Mendeleev University works in close cooperation with the UNESCO Centre of Chemistry and Education, and serves as an experimental testing ground for new educational methods and curricula. In order to train the diverse and numerous educational communities in Russia, educators at the Institute developed courses on natural protection and sustainable development to be taught by educators in hundreds of schools across nineteen regions of the Russian Federation.

Since early 2000, the Institute has been convening a series of training workshops and seminars in

Moscow and other regions; this is an ongoing process. The courses are designed primarily for secondary and high school science teachers and are built around the new educational curricula developed at the Institute. Interactive approaches and experience sharing are widely applied in these courses, as well as simulation role-playing, discussions of global problem issues, and social and economic aspects of sustainable development.

Methodology

Education for sustainable development is a very complex and innovative process.

The IPSD at the Mendeleev University uses the following features in the educational process:

- Interdisciplinary approach, which implies the combination of traditional forms of education with innovative ideas and methodologies. Young chemists learn chemistry along with special courses on sustainable development and environmental risk assessment and management, as well as sustainable patterns of production and consumption.
- Overarching approach for dealing with global problems at the local level.
- Active personal involvement and interaction between educators and students.
- Use of role-playing and other active methods of engaging students in creative participation within the teacher-student exchange.
- Simulation games with small groups of students, which create real-life problematic situations in need of sustainable solutions.

It is important to note that the Earth Charter is integrated into the text of lectures given to the students during a special course, "Problems of Sustainable Development." The course is included in the curricula of each School and Department of Dmitry Mendeleev University. It is being taught to all students during their second year for 108 hours, of which 36 hours are dedicated to the lectures, and 72 hours to practical and individual work (one semester).

All students have to master the computer game "Strategema" (an after class exercise, which allows the students to get 30 credits out of 100). The game is based on the theory and practical methods of applied systems approach and management introduced by Dennis Meadows. The game requires close interaction of several participants united in a working group that helps participants master the fundamentals of system thinking and apply them concretely to the solution of each given problem. The outcome of the game depends on coordinated decision-making that integrates the needs and perspectives of every participant.

Students also watch four documentaries on the most complex problems of sustainable development (also completed after class). During their group exercises, and also as an individual assignment, students work on finding solutions to the problems raised in these films and present them to their professor. Students can earn 20 credits for the best solutions.

All students have to prepare and turn in three papers and one thesis on sustainable development issues. Out of the three mandatory papers, one must be written on the Earth Charter principles and their importance for sustainable development processes.

By applying these methods, the Dmitry Mendeleev University plays an important role in the education of new generations of professionals ready to face interdisciplinary challenges and find innovative and sustainable solutions.

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Experience of the Institute of Sustainable Education, Faculty of Education and Management

Inga Belousa and Ilona Micule⁷⁵



Introduction

Since the last decade of the 20th century, the Latvian education system has undergone a series of dramatic changes as the result of a significant political and socio-economic transformation. Power and organizational structures have been redefined along with Latvia's integration movement towards a market economy, mature forms of democracy, and, last but not the least, EU membership. These changes have offered opportunities (as well as challenges) for education for sustainability. These changes have also made it possible for ESD to become part of the formal learning experience in Latvian universities.

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Education for sustainability, "...the greatest resource for achieving a just and ecological society,"⁷⁶ includes an integrated vision of the environment, economy and society, and involves acquiring the knowledge, skills and values necessary to guide and motivate people for sustainable ways of living and informed citizenship. This inspiring vision motivated a group of professors at Daugavpils University to establish a new educational division, the Faculty of Education and Management (FEM). Since its establishment, this Faculty has focused its activities on the development of pre-service and in-service teacher education and training.

Overview of the development of the Faculty of Education and Management and the Institute of Sustainable Education

While the process of reorientation of education began with the current cadre of teaching professionals, it became clear that institutions of teacher education needed to reorient their pre-service teacher education to address the goals of ESD. Reorienting teacher education is, indeed, a key element in the development of new professionals committed to ESD. This will help them to become 'sustainability change agents' and will considerably shorten the response time for achieving sustainable development goals in education. The initiators of the FEM had a clear vision of this ambitious objective.



Latvia Daugavpils copy.

At the outset of its establishment and development, FEM faced a variety of challenges. The Department was engaged in extensive research activities in order to develop its own unique curriculum foundation for an integrated and holistic approach to education at Daugavpils University.

The first stage consisted of the official establishment of FEM at Daugavpils University in 1993. This marked the beginning of a transition process from the centralized and rigid regulatory-oriented educational system to a democratic, integral and holistic approach. The process was enhanced by the University's participation in a broad European dialogue on the future of higher education, particularly, within the context of the Trans-European Mobility Scheme for University Studies (TEMPUS) projects.⁷⁷ The Tempus, with its strong focus on institution-based university cooperation, promoted the participation of Daugavpils University in its broad discussions on democratic cooperation, and social and environmental awareness in education. Since its inception, the FEM has based all of its pedagogical activities at the bachelor, master, and doctoral levels on the ethics and principles of sustainability that can be found in the text of the Earth Charter.

The second stage (1995-1998) was mainly focused on the integration of the holistic approach into the teaching and learning processes. This work was supported and stimulated by the Soros Foundation-Latvia, the Ministry of Education and Science, the Centre for Curriculum Development and Examinations, and other institutions that provided the professors and the research staff with opportunities to participate in the applied research activities for curriculum development and create a solid base for holistic, integrated methodology.

The third stage (1998-1999) was devoted to the investigation of the meta-curricular dimensions of teacher's education, with the issue of spirituality as the most common concern within the context of this holistic approach.

The fourth stage (1999-2003) was focused on researching the interconnectedness between the

⁷⁶ Schumacher, F. 1973 *Small is beautiful: Economics as People Really Mattered*. (Abacus, London).

⁷⁷ TEMPUS is managed by the European Commission's Directorate General on Education and Culture with assistance given by the European Training Foundation. The programme funds cooperation projects in the areas of curriculum development and innovation, teacher training, university management, and structural reforms in higher education. It puts special emphasis on the mobility of academic and administrative staff from higher education institutions, both from the EU and the partner countries, as the European Commission continues to consider higher education as a priority for its co-operation activities with the countries surrounding the European Union.

ecological and spiritual aspects of this holistic approach and its role in education for sustainability.

The fifth stage (2003) resulted in the fine-tuning of the new educational curriculum for ESD: broadening the educational perspective and goals, and clearly demonstrating the need for a new structural unit within the Daugavpils University - the Institute of Sustainable Education.

General Information about the Institute of Sustainable Education

The Institute of Sustainable Education (ISE, www.du.lv/ise) was founded in 2003 as a structural unit of FEM for scientific research activities in pedagogy, pedagogical and developmental psychology, and education and management. ISE consists of three departments: Department of Scientific Research, Department of International Projects, and Department of Scientific Editions. The Institute is committed to a transdisciplinary and holistic approach to curriculum development and the vision of education for sustainability.

Curriculum and pedagogical changes to promote sustainable education: Masters Programme on Pedagogy

Education for sustainability creates a lot of challenges to curriculum innovators, especially if it is interpreted as promoting change agency and not only as a content-

based discipline. However, Huckle stressed that curriculum reform can provide a context and opportunity for education for sustainability and facilitate opportunities for its inclusion into formal education.⁷⁸

An academic Masters Programme on Pedagogy that has been reoriented for ESD purposes can be used as an example of qualitative changes in the education process. The transformations have been implemented at three levels: programme structure, course content, and programme methodology.

Each educational programme is divided into distinct units: the *Holistic Pedagogy* unit consists of three courses, including Environmental Education; Spirituality of Pedagogy; and the Integrated Approach in Education; the *Educational Philosophy* unit consists of three courses, namely Theoretical Foundations and Contemporary Issues of Educational Philosophy; Education for Sustainable Development; and Innovative and Future Education. Each unit is taught from a common perspective and evaluates students' academic performance through an integrated paper. The challenge of these new study courses has been, and still is, to create a learning environment that is problem-based, eco-centric, focused on social change, and encouraging of learners' understanding of global change, and cultural and biological diversity.

The holistic approach, as a perspective of reorienting education towards sustainable development, reflects the belief that everything in the world is interconnected.



Prof. Ilga Salite inaugurates the establishment of the Baltic and Black Sea Consortium in Educational Research (BBCC), May, 2005



4th JTET Conference, Helsinki, June 1st 2006

⁷⁸ Huckle, J. (1995) *Reaching Out*. WWF: Godalming.

According to the holistic perspective, the educational process is based on the choices and responsibilities of each learner. Such an educational process encourages each learner to develop their own identity and to learn from others while being involved in educational and social processes themselves. The hope at the FEM is that the transformation of the Masters programme will foster qualitative changes -- not only in the context of the study programme or the university, but also in the society at large. Similar qualitative changes were integrated into the professional training programme and into the FEM's Bachelors, Masters, and Doctoral programmes in education at Daugavpils University.

Cooperation with UNESCO on curriculum development and practical implementation of ESD

As previously stated, in order to reorient the existing educational process towards the goals and values of sustainability, the ISE leadership began to refocus its discipline-oriented curriculum towards a competency based model arranged around a number of themes and learning areas. Active cooperation with UNESCO and participation in various EU educational projects and programmes helped them to move towards this goal.

From 2000-2004, the ISE staff participated in the first stage of the UNESCO University Twinning and Networking Programme (UNITWIN) project "Reorientation of Teacher Education towards Sustainable Development." The UNITWIN programme was conceived to advance research, training and programme development in higher education by building university networks and encouraging inter-university cooperation through transfer of knowledge across borders. Participants learned how to develop their own educational and research materials.

Since 2006, ISE has been cooperating with the UNESCO Latvian National Committee, and also participates in the Associated School Project.⁷⁹ ISE staff and educators contribute to project activities aimed at implementing innovative approaches in the educational system and developing new teaching methods. The project sees the four pillars of education for the twenty-

first century as: learning to be, learning to know, learning to do, and learning to live together. The project promotes the participation of pupils and students in the development of peace, tolerance and democracy in Latvia and in the world.

Journal of Teacher Education and Training (JTET) / Journal of Teacher Education for Sustainability (JTEFS)

Participating in the International Network on Reorienting Teacher Education to Address Sustainability provided Daugavpils University with opportunities for an extensive global dialogue, especially concerning action-research and ESD-related demonstration projects. The Journal of Teacher Education and Training (JTET) was created as the result of the activities of the International Network, and the University's desire to launch an international journal. The Editorial Board of the JTET brought together researchers from about 16 countries, and the first edition was published in May 2001. The authors shared the findings of research focused on their own methodologies to integrate the issues of sustainability, sustainable development and ESD into teacher training and education for sustainability. In 2003 the Journal received official recognition from the Academy of Science of Latvia (Council of Science) and was included in the list of universally recognized peer-reviewed scientific editions. By 2004, the Faculty of Education and Management had founded the Institute of Sustainable Education, and JTET became a journal of this Institute.

In April 2007, the Editorial Board of the JTET announced a change in the Journal's title to *the Journal of Teacher Education for Sustainability (JTEFS)*. This change reflects the next stage in its development: the integration of accumulated experiences and research materials into everyday practices of teacher training and education for sustainability. Although intensive research and the theoretical development of methodological approaches continue, JTEFS will now give priority to applied research based on the principles of action research and the qualitative contributions from the multitude of new ESD practices and methodologies.

⁷⁹ The project was launched in 1953 in order to strengthen the commitment of children and young people to actively strive to promote mutual understanding and peace in the world. More than 7,000 schools in the world had joined the ASPnet by the year 2002. Latvia has participated in the UNESCO ASPnet since 1993, gradually embracing 26 schools. (<http://www.unesco.lv/eng/index/programs/asp.html>).

The Journal's contributors cover a wide scope of topics and research methodologies; integrate new ideas on education for sustainable education and sustainability per se. The main JTEFS themes are:

- Teacher education / professional development of teachers
- Involvement of teachers in different levels of education
- Didactics
- Curriculum issues
- Teachers' feedback on environmental education, education for sustainable development and sustainability
- Organizational management and others.

Practical and theoretical research: national and international projects

The faculty and research staff of the Institute closely cooperates with various research associations: All India Association for Educational Research, International Association for Children's Spirituality, International School Psychology Association, International Seminar on Religious Education and Values, etc, as well as a range of research networks: Environmental Management of Sustainable Universities, European Council for High Ability, etc. This productive collaboration contributed to ISE's efforts in developing the meta-curricular educational content by bringing in issues of spirituality, tolerance, and gender equality.

In order to integrate shared values and ethics for sustainability into the educational curriculum for teacher training, the ISE management initiated student activities connected with ESD and the Earth Charter. It also supported the foundation and development of a student's NGO based on the content and ethics of the Earth Charter; and, facilitates students' research on ESD and publishes its results.

The Earth Charter Centre for ESD is joining forces with the Institute of Sustainable Education to better assist the Institute's staff, researchers and students to develop educational materials; facilitate research and educational activities; and promote partnerships to integrate the

principles of sustainability in education using the Earth Charter as an ethical framework.

Challenges, Lessons Learned and Conclusion

Most modern western education patterns simply reinforce practices and methodologies to equip young people for the new information age and highly competitive economy. The process of market globalisation also negatively affects education and hampers sustainable development. To contrast this trend, the Faculty of Education and Management of Daugavpils University has been increasingly getting involved in processes of reorienting education to face the challenges of sustainability. As an example, the Faculty has become involved in the international network of teacher education within the context of the UNESCO global teacher education project and in the establishment of the Baltic and Black Sea Circle Consortium (BBCC) in educational research. In this sense, this University has shown its commitment to be in the forefront to promote processes of education for sustainable development in the regional and national level.

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