

Journal of Education for Sustainable Development

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Journal of Education for Sustainable Development 2010 4: 203

DOI: 10.1177/097340821000400207

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Reorienting Education Practices towards Sustainability

MOACIR GADOTTI

Abstract

This article reflects on the potentialities of education practices guided by the idea of sustainability and how they can contribute to the reformulation of the contents and methods of learning and to the quality of education. Sustainability entails the transformation of all aspects of school life, from preschool to the university. The article also points to some challenges and strategies for integrating sustainability into education practices and into the school curriculum. The key challenge is the need for a different pedagogy, an ecopedagogy, a holistic pedagogy that overcomes the anthropocentrism of classic pedagogies. Sustainability represents an opportunity for the renewal of old education systems founded on competitive principles and values and based on a predatory view of the world. Educating for sustainability means educating for the emergence of a different, possible world.

Keywords: sustainability, education for sustainability, ecopedagogy, ecopolitics

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Modern education systems were born in Europe in the nineteenth century at the height of industrial development and despite the real diversity of nations that adopted them later, they are very similar. In the twentieth century, they were strengthened with the expansion of the right to education, enshrined in the 1947 Universal Declaration of Human Rights. Despite this enhanced position and international programs for evaluating school performance and the International Program for Student Assessment (PISA), we begin the twenty-first century questioning their capacity to promote peace and understanding. UNESCO has rightly affirmed the need to reorient education at all levels towards a culture of peace and sustainability. This is the central concern of the Decade of Education for Sustainable Development (2005–2014) and of recent studies like those by Peter Blaze Corcoran and Philip Osano (2009).

REORIENTING EDUCATION

Thus, speaking about the ‘reorientation of education practices through sustainability’ takes for granted that many education systems promote unsustainable education practices that need to be revisited. We understand ‘education practices’ to mean those practices that take place primarily but not exclusively in the formal education process. We do not exclude nonformal education practices. However, we are centred more on formal education because it is also the focus of the Decade of Education for Sustainable Development (DESD), the primary aim of which is the ‘reorientation of the current formal education curriculum’. The guiding document for the Decade explicitly states that its major objective is:

to integrate principles, values and practices of sustainable development to all aspects of education and teaching, in order to create a more sustainable future in terms of the integrity of the environment, of economic viability and of a fair society for present and future generations (...). The programme Education for a Sustainable Development demands the re-examination of educational policy, from kindergarten, up to university and lifelong learning (UNESCO 2005a: 57).

The concept of sustainability is complex and it goes far beyond sustainable development (Gadotti 2009). To us, sustainability is the dream of living well. Sustainability is a dynamic balance with others and the environment; it is the harmony among differences. As Carlos Rodrigues Brandão (2008: 136) states, sustainability:

is opposed to everything that suggests unbalance, competition, conflict, greed, individualism, domination, destruction, expropriation and undue and unbalanced material acquisition, regarding change and social transformation of society or environment. So in the most generous and widest way, sustainability means a new egalitarian way, a free, fair, inclusive, and solidarity way to get people together in order to build their social living world at the same time that they handle, manage or transform the natural sustainable environments where they live and on which they depend to live and be together.

The concept of sustainability has an excellent educational component because the preservation of the environment depends on ecological awareness, which depends on education. A concrete strategy to start this debate inside our schools is to have an eco-audit in order to discover where exactly schools have been unsustainable. It is very simple: we only have to trace every action taken and compare these data with the principles of sustainability. It is not hard to identify, in our curriculum, where we are and where we are not integrating the concept of sustainability in our concrete educational practices.

A NEW PEDAGOGY

A new educational practice requires a new pedagogy. That is why in recent years we have insisted on the need for an ecopedagogy, namely a pedagogy appropriate to education practices based on sustainability. The history of ecopedagogy initially appears as 'pedagogy of sustainable development' in a study done by the Latin American Institute of Communications Pedagogy (ILPEC—Instituto Latinoamericano de Pedagogía de la Comunicación), in Costa Rica and signed by Francisco Gutiérrez (1994). That study already speaks of a holistic vision, of the dynamic balance of human being and the category of sustainability, which are essential presuppositions of ecopedagogy.

Francisco Gutiérrez and Cruz Prado, of the ILPEC, then recognised that the pedagogy of sustainable development was not broad enough in scope to constitute a great innovation in education theory, and they launched the concept of 'ecopedagogy' in their book *Ecopedagogia e cidadania planetária [Ecopedagogy and planetary civilization]* (Gutiérrez and Prado 1999). For them ecopedagogy would be the kind of pedagogy that promotes learning the meaning of things out of everyday life.

Ecopedagogy overcomes the anthropocentrism of traditional pedagogies and establishes the symbiosis between human beings and nature as an underlying assumption. The Earth comes to be regarded also as a living being, as Gaia. Hence it would be better to call ecopedagogy 'Earth Pedagogy' (Gadotti 2001). This meaning had been recognised in the discussions that took place in 1999 where participants included Francisco Gutiérrez, Cruz Prado (ILPEC) and Mirian Vilela (Earth Charter Initiative) at the First International Earth Charter Conference from the Standpoint of Education, held in São Paulo. This conference approved a document with the title: 'Ecopedagogy Charter: In Defense of a Pedagogy of the Earth'.

Ecopedagogy implies a curriculum reorientation, so that some principles may be incorporated in it. These principles should, for example, be oriented towards the conception of content and elaboration of school material. Jean Piaget has taught us that a curriculum should include things that are meaningful to students. We know this is correct, but incomplete. The contents that are present in the curriculum should be meaningful to the student, and can only be meaningful to them if these contents are also meaningful to the health of the planet.

NEW STRATEGIES

What strategies are needed to reorient current formal education curricula? This was one of the questions discussed in the 4th International Environmental Education Conference, held from 24–28 November 2007 at the Center of Environmental Education (CEE) in Ahmedabad, India. The final conference report points to the necessity of promoting a ‘transition from transmissive education to transformative education; that includes elements of insight, reflection, learning in the outdoors, and learning through sustainability themes, implementing ESD in schools through a series of regional hubs with cluster of schools in partnerships with existing tertiary institutions, government and nongovernment organizations’ (CEE 2007: 68).

Basically, to reorient current formal education curricula, we need to promote an experiential and participatory ‘social learning’ (Wals 2007). In this process we need to take into account existing programs such as Eco-Schools, Green Schools, Environmental Schools, ESD Schools, Sustainable Schools and Citizen Schools. As Michael W. Apple said, ‘the impressive and ongoing efforts to build “Citizen Schools” and to employ “participatory budgeting” in Porto Alegre, Brazil also documents how an education that is grounded in processes of social learning can lead to not only greater understanding of one’s social and natural environments, but also to a willingness and ability to act to transform them’ (Michael W. Apple, cited in the Afterword, Wals 2007: 508).

One of the discussions raised at the UNESCO World Conference on Education for Sustainable Development held in Bonn, Germany, from 31 March to 2 April 2009 revolved around the concept of Eco-schools and Sustainable Schools (Workshop 19). The issues raised in the discussion demonstrate the concern about the relationship between pedagogical and architectonic projects of schools. While the eco-schools focused on physical sustainability of the schools’ constructions—especially schools in the northern hemisphere—the self-named sustainable schools tried to join an environmentally correct architectonic project with a politically correct pedagogical project. Sustainability reinforces the key elements and characteristics of quality teaching/learning: the school physical environment (recreation areas, classrooms, cafeteria, green areas, cultural activities, sanitation, water supply, health, food), the social environment (valuing pupils’ culture), the linkages with the school community and intercultural approaches. In Bonn, the discussions showed that an impediment to more sustainable schools is the rigidity of ‘prescribed’ curricula and of official examination systems, which prevent teachers’ creativity and innovation in teaching/learning.

A CHALLENGE: EMBRACING A SYSTEMIC VIEW

One of the great challenges of reorienting educational practices towards sustainability is to overcome the naturalistic view of the environment and to embrace a systemic view containing multiple, undetermined and interdependent causalities to conceive a learning environment of sustainable management beyond the promotion of isolated actions (reducing, reusing, recycling, etc.). Without nourishing a dialogue among the

community, developing a curriculum of clean technologies is impractical. We must integrate the local economy (sustainable consumption); energy efficiency (green technologies, renewable resources, responsible consumption); human interactions (human rights, shared principles, power relations); and biodiversity (ecological interactions). Finally, these elements are gathered into a systematised knowledge and into new habits for sustainable living (O'Sullivan 2004).

In terms of the level of teaching, we have to adopt different strategies: in primary school, for example, our children need to experience (experiences are more meaningful than words) and to know plants' and animals' needs, their habitats, how to reduce, reuse and recycle materials, how to keep ecosystems linked to forests and water. At a more advanced level, we need to discuss biodiversity, environmental conservation, energy alternatives and global warming. At the university level, besides diffusing environmental information, we need to produce new knowledge and to conduct research that aims at looking for a new development paradigm.

The Ahmedabad Declaration reminds us of the first version of the Earth Charter from the RIO-92 Global Forum—a call to education for sustainable life. The Ahmedabad debates were dominated by the central thought of Gandhi's work: 'my life is my message'. Doubtless, we have to give examples, we also have to be the difference we defend. The Ahmedabad Declaration 2007: A Call to Action (CEE 2007: 20–21) makes it clear:

The example we set is very important. Through our actions, we add substance and vigour to the quest for sustainable living. Using creativity and imagination we have to think a second time and change the values we live by, the choices we make, and the actions we take (...). We must reconsider our tools, methods and approaches, our politics and economics, our relationships and partnerships, and the very foundations and purpose of education and how it relates to the lives we lead.

SUSTAINABLE CONSUMPTION

As our way of life was a dominant theme in Ahmedabad, sustainable consumption had much relevance. There is no way of talking about sustainability without talking about education for sustainable consumption. The development model of the rich countries cannot be generalised by the simple fact that we would need one more planet—we would actually need two to six planets—to be able to feed everyone. The Earth surface necessary to produce animal protein for all would be 15 times larger than the space necessary to produce vegetable protein. Besides, animal protein is the cause of numerous illnesses, including cancer, diabetes and vascular illness. Thus, the agricultural model is an issue. It is necessary to create another model, a more sustainable one, both for people's health and for the protection of the environment.

THE GARDEN

The concept of sustainability, broadly understood, encompasses a whole new project for civilization. Applied to pedagogy, it can have implications in all fields of education,

not only in environmental education. It becomes a key concept for understanding the education of the future. It entails new principles and values and suggests new symbols like the 'garden' in the vision of the American educator Emily De Moore, who uses the garden as a metaphor and as a physical reality. In an article for the review *Pátio*, she speaks of 'educational values for sustainability' and understanding the 'garden as curriculum' (De Moore 2000). The garden image embodies emerging values of sustainability. The garden allows for working with the Earth, learning to care for the 'fabric of life' (Capra 1996); perceiving the Earth through the Earth; seeing the seed assume the form of the plant and the plant assume the form of food, the food that gives us life. It teaches us patience and careful handling of the Earth between sowing and harvesting. In gardening, we learn that things are not born ready made; that they need to be cultivated and cared for. We also learn that the world is not ready made, it is being made, it is making us; that building it demands persistence, hopeful patience of the seed, which at some moment will sprout and flower, and will be fruit.

I propose a reconceptualization of the curriculum in the form of a school centered on the garden and based on the Earth and its functioning. With the natural world as its primary text, this curriculum seeks to recover from the earth the values, the metaphors, and the language of orientation to sustainability... The Earth and its functioning in accordance with the natural laws is a permanent reality, and the history of the universe, from its birth to its present moment is the all-encompassing metanarrative in which our individual lives and stories are woven. The garden provides us with a means of effective and empirical access to these important narratives (De Moore 2000: 11).

De Moore cites Paulo Freire's pedagogy of the oppressed and his 'pioneering' in this pedagogy, stating that for more than 40 years he warned that the systems of life on Earth were being ravaged to the point of losing their capacity to sustain life on the planet. 'If we want to adopt a pedagogy that produces values of sustainability, Freire's thought must be extended to include the liberation of the natural world', she says (De Moore 2000: 12). She then cites a passage from Freire's *Pedagogy of the Oppressed*: 'the consciousness of the oppressor tends to transform everything around him into an object of his domination. The earth, property, production, the creations of people, people themselves, time—everything is reduced to the condition of objects at his disposition'. Paulo Freire had an expanded consciousness of the world, as we can verify in the same book (Freire 1981: 94): 'love is commitment to human beings. Wherever these oppressed may be, the act of love is in being committed to their cause'. De Moore (2000: 14) concludes by saying that 'this curricular model is essential if we want to provide students the knowledge, skills, and critical awareness needed not only for justice or social effectiveness, important concerns of curricular theory, but also for the achievement of true freedom, community, and sustainability of the Earth and its forms of life'.

In an era of converging crises, with the advent of global warming and of profound climate changes, De Moore's ecopedagogy is very much about education for sustainability. As Gro Harlem Brundtland says in the preface to the United Nations Report *Our Common Future*, 'Unless we are able to translate our words into a language that can reach the minds and hearts of people young and old, we shall not be able to

undertake the extensive social changes needed to correct the course of development' (World Commission on Environment and Development 1987).

Developing theoretical-practical teaching aids necessary for this education for sustainability is the task of another pedagogy complementary to Earth Pedagogy, the 'pedagogy of sustainability' (Antunes 2002). The category of 'sustainability,' as Leonardo Boff argues, is central to the ecological cosmovision, and may constitute one of the anchors of the new paradigm of civilization which seeks to harmonise human beings, development and the Earth understood as Gaia. Education for sustainability has become a 'new field of learning and action' (Haan 2007) that entails building new skills and competencies (UNESCO 2006).

EARTH CHARTER EDUCATION

In April 2009, Earth Charter International published a document of the Earth Charter Education Commission with the title *A Guide for Using the Earth Charter in Education*, specifically to reorient education practices through sustainability, using the Earth Charter (www.earthcharter.org). This document was developed with the aim of offering general indications and practical teaching aids for people and groups interested in using the Earth Charter in schools and classrooms. There are many possible uses of the Earth Charter for education for sustainability. It depends greatly on the context and on the creativity of teacher and student. The Earth Charter can help improve the quality of education by integrating ethics into all topics and contents, with the aim of educating for a more just, sustainable and peaceful world. To do this, it is important to train teachers so they can know how they ought to approach the issue of sustainability (UNESCO 2005b; UNESCO 2007). In relation to the use of the Earth Charter in education, teachers can find teaching aids on different websites. A Virtual Library on the Earth Charter may be found at www.earthcharterinaction.org/invent/, with historic material, essays, publications, teaching resources, etc. Teaching experiences with the Earth Charter may be found at the Earth Charter School Platform: <http://ec-snet.wikispaces.com/>. A video produced with drawings of Children in São Paulo (Brazil) may be found on Youtube: www.youtube.com/watch?v=1cCSD7n2rSc.

There are many concrete practices of reorienting the curriculum through the concept of sustainability. Many have already been published (UNESCO 2007). Canadian educator and UNESCO representative Charles Hopkins has presented eight case studies of good practices of teacher training institutions (UNESCO 2007), encompassing a range of countries and issues. A document published by the Earth Charter Initiative in Costa Rica (UNESCO/Earth Charter International 2007) has also presented a series of best practices using the Earth Charter in education for sustainability.

SEEDS ARE SPREADING

These new education practices based on sustainability are spreading around the World. In 2007, the Ministry of Education in Brazil, in partnership with the Bioma

Institute, published a remarkable account of a successful project called 'Project Young Citizen, Friend of Nature' (Marinho and Labrea 2007), presenting teacher training methods. Another highlight is the Seeds of Spring Project (Antunes and Tomschinsky 2009). It was developed by the Paulo Freire Institute in the Municipality of Osasco, São Paulo. This project, begun in 2006, based on the principles and values of sustainability, promotes active involvement by children and youth in exercising citizenship from childhood. Groups of children—Seeds Groups, chosen by their peers—are organised to discuss, propose and commit themselves to suggestions and actions related to the Eco-Político-Pedagogical Project (EPPP) in schools from the standpoint of sustainability. In weekly meetings, they participate in practical activities that involve exercises of 'reading the world' (Paulo Freire), the aim of which is to learn the vision children have of the school, the neighbourhood, the city, life in common, health, leisure, sports, culture and other matters significant to the situation of the students of each school. Children and adolescents are guided towards identifying unsustainable practices and indicating solutions, to recognising and assessing potentialities as they seek the improvement they yearn for in school, neighbourhood and city. They become committed to their proposals for change, and also to becoming part of that which they wish to see achieved.

In summary, I think that sustainability is a powerful concept. It is an opportunity for education to renew old systems based on competitive principles and values and to introduce a culture of sustainability and peace in the school communities, in order to be more cooperative and less competitive. Sustainability can be a fundamental category for rebuilding current educational systems, which are still based on a predatory view of the world. Environmental education and education for sustainable development are fundamental axes to these reforms when they are associated with human rights, gender rights, democratic rights, peace and sustainability. That is the reason I believe that the concept of sustainability contributes to the construction of a new quality in education, a social-environmental quality, not just the improvement of the same education we have today. Simply improving the current model of education is to continue to follow the educational model that has been destroying the planet since the nineteenth century.

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