# Education, Sustainability and Civil Society

**Millennium Visions**



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Iducation for sustainability is a key feature of indigenous cultures where human ecology exists in harmony with natural ecology. Traditional systems for codifying knowledge of the land, its cycles and the need to respect it are reflected in management practices that enable the land and its resources to be used in a sustainable way. This environmental knowledge is knowledge for survival and everyday practical use, and is passed down through the generations through modelling, stories, ceremonies and a network of sacred places[1].

However, indigenous priorities have been mostly supplanted by colonial and industrial cultures that value the environment only in so far as it is economically productive. The consequent disregard for the environment means that knowledge, values and skills to support sustainability are underplayed in formal education. Knowledge about the earth, the functioning of ecosystems and the use of resources is taught in science, geography and social studies. However, few attempts are made to link the health of people to the sustainability of ecosystems, and students are rarely asked to reflect upon the impacts of their activities on the earth. Indeed, knowledge of the environment is usually compartmentalised into disciplines with each one then reduced to an abstract, academic commodity that can be traded for credentials through systems of competitive assessment. This is the 'reproductive' role of the state and formal education which socialises young citizens to contribute to desired economic activities and goals by developing vocational knowledge and skills as well as the attitudes of responsibility, diligence, punctuality and social cohesion that will maintain and promote these goals.

However, governments also need to maintain their public legitimacy by anticipating trends that may challenge national well-being and responding to public concerns about social problems. The curriculum is one way in which governments seek to achieve this goal and this involves developing the capacities of citizens to respond to the anticipated challenges, to identify and articulate their concerns, and to contribute as active and informed citizens to their solutions. They are also required to encourage commitment to various desired social goals, such as equality, multiculturalism, democracy, national
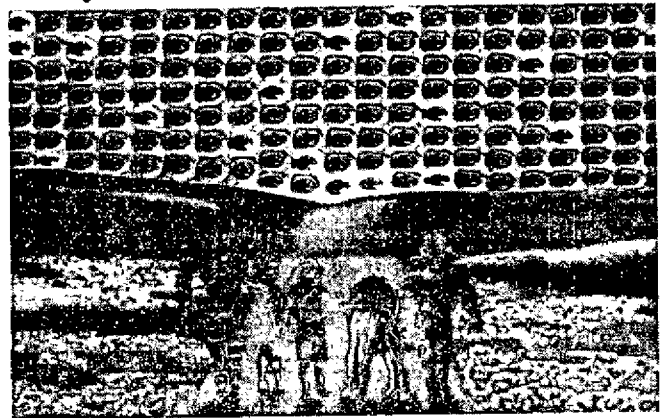
loyalty and internationalism, depending upon local political, social and economic priorities. In this way, the curriculum serves as a vehicle for creating and maintaining a civil society. Increasingly, a commitment to sustainability is coming to be seen by governments as one of the desired social goals of a civil society.

The curriculum of schools is a product of both these 'reproductive' and 'civil society' roles of governments. Unfortunately, the press of short-term priorities often has given ascendancy to the reproductive roles and have entrenched:

- hierarchical patterns of knowledge which privilege formal literacy, mathematics and abstract science,
- hierarchical relationships between teachers and students,
- teacher-controlled processes of learning, and
- competitive assessment practices that serve the social differentiation and the reproductive roles of schooling.

Trainer and Orr, amongst others, argue that these processes also contribute to present day patterns of unsustainable development.[2] Where a sustainable civil society requires a balance between self-interest and the common good, a spirit of co-operation, a desire to participate, and civic responsibility, many aspects of the formal and hidden curriculum of schools encourage individualism, materialism, and the values that underlie unfettered economic development.

## Reorienting education towards sustainability: A process of second-order change

The process of reorienting the curriculum towards sustainability is a broader and more pervasive task than that of revising syllabuses and devising new teaching and learning materials that incorporate principles and examples of sustainability and even debates over different meanings of sustainable development. As Orr remarks, 'The crisis [of unsustainability] cannot be solved by the same kind of education that helped create the problems ... Schools, colleges and universities are part of the problem.'[3] Thus, reorienting the curriculum towards sustainability requires significant educational reform or what Cuban calls 'second-order

change'.[4] Where first-order change seeks to improve the effectiveness or efficiency of educational processes, e.g. through new courses or materials without disturbing the basic organisational or instructional milieu of education, second-order change reforms the fundamental ways in which educational systems and institutions function and includes new goals, structures, and roles for schools, teachers, and students.'[5] Three tasks for second-order curriculum change are described here.

**1. A whole-of government commitment to sustainable development:** Around the world, there is a major need for governments to recognise education for sustainability as a key element in a whole-of-government commitment to sustainable development. Such a commitment would see all government agencies working collaboratively, and in partnership with industry, business, grassroots organisations and members of the public, to integrate social, economic, cultural, political and conservation goals. A sustainable society will be one in which all aspects of civic and personal life are focused on sustainable development and all government departments and levels of government work cooperatively to advance such a society. Particular attention is needed to the place of education in sustainable development policies. The roles of pubic awareness, education, communication and training for sustainability are too often usually seen as minor ones, subservient in importance to legislative, economic and sometimes even punitive tools. Such preventative and rehabilitative mechanisms do not address the need to create a civil society that is aware of personal and structural causes of mal-development, committed to living sustainably, and demanding of increased personal, industry and government actions to advance sustainability.

**2. A re-affirmation of the role of education in building civil society:** The dual roles of education - in both reproducing politically-endorsed (and mostly economically motivated) values and empowering students to play an informed and active role as members of civil society - are not necessarily mutually exclusive: formal education is designed to promote both. However, without a whole-of-government commitment to sustainable development in the past, the curriculum has tended to reproduce an unsustainable culture that intensifies environment and development problems rather than empowers citizens to work towards their solution. This situation of unbalanced priorities calls for a reaffirmation of the role of formal education in building civil society. This involves focusing the curriculum on helping students develop criteria for determining what is best to conserve in their cultural, economic and natural heritage and to discern values and strategies for creating sustainability in their local communities and extending it, with others, to national and global contexts.

This is not to say that the economic imperatives that underlie the reproductive functions of formal education are to be ignored. Economically sound, ecologically sustainable and socially just forms of development are to be encouraged. However, a reorientation of the curriculum towards sustainable development calls attention to the problematical effects of inappropriate development and unfettered economic growth, and also to the ways that these are perpetuated through dominant patterns of teaching and assessment and the limited range of knowledge, attitudes and skills students learn as a result.

**3. Reforming curriculum and pedagogy for sustainable development:** A curriculum for sustainability in a civil society would locate environmental citizenship among its primary objectives. This requires a revision of many existing curricula and the development of objectives and content themes, and teaching, learning and assessment processes that emphasise moral virtues, ethical discernment, learning how to learn, reflection, creativity, civic mindedness, and the motivation and abilities to work with others to help build a sustainable future. Viewing education for sustainability as a contribution to a politically literate civil society is central to the reformulation of environmental education post-Rio. As Orr argues, 'I see no prospect whatsoever for building a sustainable society without an active, engaged, informed, and competent citizenry' and that this requires 'an unwavering commitment by educational institutions to foster widespread civic competence'.[6] This calls for a 'new generation' of theorising and practice in environmental education and a rethinking of several common approaches.[7]

Firstly, education for sustainability calls for an end to the unbalanced emphasis on individual lifestyle change and responsible environmental behaviour in formal education[8] and, instead, calls for a recognition that 'environmental problems are structurally anchored in society and our ways of living' and that answers to them need to be sought in working to transform the social conditions of human and non-human life as well as in individual lifestyles.[9] This draws attention to the economic and political structures which cause poverty and other forms of social injustice, and perpetuate unsustainable practices. It also draws attention to the need for students to learn the many processes for solving these problems through political processes.

Secondly, and as a result, this means increased attention to the humanities and social sciences in the curriculum. This would give priority in the curriculum to issues of social justice and participatory politics as well as ecological sustainability. The traditional environmental education goal of changing individual lifestyles is guided by the technocratic rationality and behaviouristic goals of modernist Western science. Yet, many writers have traced the assumptions and attitudes to nature, women and development upon which modernist science is based as a major cause of environmental exploitation, poverty, the loss of traditional knowledge, and the increasing marginalisation and social dislocation of many of the world's people.[10]

Viewed from this perspective, a curriculum for sustainability would reflect an alternative epistemology to that of modernist science. It would seek to educate young people to value diverse ways of knowing, to identify with their cultural heritage and value it as a contribution to the global cultural diversity, and

to respect community-based approaches to social change. Such an epistemology challenges the dominance of natural science and nature experience in environmental education. The natural sciences provide important abstract knowledge of the world but, of themselves, do not contribute to sustainable development. Indeed, education in modernist ways of science has proven to be a recurring means through which much mal-development has occurred.[11] As Berberet notes, it is scientists who have performed the research, trained the engineers and managers, and developed the technologies that have often had a devastating impact on the environment.[12]

Thirdly, a re-affirmation of the contribution of education to civil society means that the central goals of education must include helping students learn how to identify and address those elements of unsustainable development that concern them. This will involve students in learning how to reflect critically on their place in the environment and to consider what sustainability means to them and their communities. It also will involve practice in envisioning alternative ways of development and living, evaluating alternative visions, learning how to negotiate and justify choices between visions, making plans for achieving desired ones, and participating in community actions to bring such visions into effect. This is the ability which Jensen and Schnack[13] call 'action competence' or environmental citizenship. Democratic action competence is the opposite of predetermined behavioural change as a goal for environmental education and aligns education for sustainability as part of the process of building an informed, concerned and active civil society.

## Conclusion

Reorienting the curriculum towards sustainable development involves a major process of educational reform and innovation. As Smyth remarks, 'It is difficult to avoid the conclusion that many have reached that education should be largely recast'[14] when the wide scope of the task of reorienting education towards sustainability is considered. Many pre-Rio approaches to environmental education have long been described as a 'failed innovation'[15] despite the many successful initiatives that could be cited. Indeed, Fullan laments, 'We have a huge negative legacy of failed reform that simply cannot be overcome simply through good intentions and powerful rhetoric.'[16]

To talk of reorienting education towards sustainability is powerful rhetoric. However, we have much to learn about the processes of educational reform. Learning from the successful experiences of other educational reform movements and relating their lessons to education for sustainability and local cultural contexts must become the new priority of priorities for education and all those who, like Orr, view 'The crisis of sustainability, the fit between humanity and its habitat' not only as 'a permanent feature on the public agenda' but 'as *the* agenda'.[17] ✪

## Notes

1   See, for example, Rohanna Ulluwishewa, Abdul Aziz Kaloko and Dy Hairuni Hj Mohamed Maricar 1997, *Indigenous Knowledge and Environmental Education*, unpublished paper presented at National Environmental Education Workshop, Universiti Brunei Darussalam, June.

2   See, for example, Trainer, T. 1990, 'Towards an Ecological Philosophy of Education', *Discourse*, vol. 10, no. 2, pp. 92-117; Orr, D. 1992, *Ecological Literacy: Education and the Transition to a Postmodern World,* State University of New York Press, Albany; Smith, G. 1992, *Education and the Environment: Learning to Live within Limits*, State University of New York Press, Albany; Fien, J. ed. 1993, *Environmental Education: A Pathway to Sustainability*, Deakin University Press, Geelong; and Huckle, J. & Sterling, S., eds 1996, *Education for Sustainability,* Earthscan, London.

3   Orr, D. 1992, *op. cit.*, p. 83.

4   Cuban, L. 1988, 'A Fundamental Puzzle of School Reform', *Phi Delta Kappan*, vol. 70, no. 5, pp. 341-344.

5   Fullan, M. with Stiegelbauer, S. 1991, *The New Meaning of Educational Change,* Cassell Educational Limited, London, p. 21. In relation to education for sustainability, Sterling calls this a 'constructive' approach to curriculum reform. See Sterling, S. 1996, 'Developing a Strategy', in J. Huckle & S. Sterling, eds, *Education for Sustainability*, Earthscan, London.

6   Orr, D. 1992, *op. cit.*, p. 84.

7   I am indebted to Soren Breiting for the phrase 'new generation of environmental education'. See Breiting, S. 1993, 'A New Generation of Environmental Education: Focus on Democracy as Part of an Alternative Paradigm, in R. Mrazek, ed, *Alternative Paradigms in Environmental Education Research,* North American Association for Environmental Education, Troy, Ohio.

8   For a critique of 'shaping responsible behaviour' as a goal of environmental education, see Robottom, I. & Hart, R. 1995, 'Behaviourist EE Research: Environmentalism and Individualism, *Journal of Environmental Education,* vol. 26, no. 2, pp. 5-9.

9   Jensen, B. B. & Schnack, K. 1997, 'The Action Competence Approach in Environmental Education, *Environmental Education Research*, vol. 3, no. 2, pp. 163-178.

10  See, for example, Merchant, C. 1980, *The Death of Nature: Women, Ecology, and the Scientific Revolution*, Harper and Row, San Francisco; and Shiva, V. 1989, *Staying Alive - Women, Ecology and Development*, Zed Books, London.

11  Orr, D. 1994, *Earth in Mind*, State University of New York Press, Albany.

12  Berberet, W. G. 1989, *Education for Sustainable Development*. Globescope Pacific Conference, Los Angeles, p. 4.

13  Jensen, B. B. & Schnack, K. 1997, *op. cit.*

14  Smyth, J. 1995, 'Environment and Education: A View of a Changing Scene', *Environmental Education Research*, vol. 1, no. 1.

15  See Greenall, A. 1981, 'Environmental Education: A Case Study of National Curriculum Action', *Environmental Education and Information*, vol. 1, no. 4, pp. 285-294.

16  Fullan with Stiegelbauer 1991, *op cit.*, p. 354.

17  Orr (1992) *op. cit.*, p. 83.