



# Educating for Eco-Justice in an Era of Ecological Uncertainty

by Chet A. Bowers

What is ironic, even tragic for future generations, is that the various approaches to educational reform being advocated by politicians, parents, and professional educators in the United State do not take account of the rapid changes occurring in the Earth's ecosystems. Equally tragic is that these approaches to reform, like an unchecked virus, are spreading to other regions of the world.

These reforms do not take account of the scientific consensus that global warming is occurring and that it is being caused by human activity. Nor have the decline of key fisheries such as those of the Grand Banks and the North Sea, and the impact of the over 80,000 synthetic chemicals introduced into the environment on the viability of natural systems ranging from marine ecosystems to human health, influenced the different agendas for educational reform. Indeed, one of the central points to be made is that the reform proposals, as varied as they are, are based on a common set of cultural assumptions that were formed before there was an awareness of ecological limits.

This indifference toward considering the educational implications of the ecological crisis will lead to a further expansion in economic activity and technological dependence that, in turn, will continue the pattern of undermining the sustaining capacity of natural systems. That globalization is also being understood in terms of expanding markets in ways that will introduce more of the world's population to the North American lifestyle of consumerism makes the prospects of future generations even more problematic.

Proposals for educational reform being adopted in the United States and elsewhere can be grouped into three categories: (1) the so-called conservative agenda of promoting school

accountability, a voucher system, and charter schools; (2) the across the political spectrum support for making computers the central feature of the educational process; and (3) the continuing efforts of professors of education who carry on the Dewey/Freire tradition of thinking of the classroom as preparing students to develop the critical capacity to construct their own knowledge and values.

The suggestion that these approaches to educational reform are based on a common set of ecologically problematic cultural assumptions may appear as naïve and thus ill founded. However, closer consideration of the conceptual basis of these approaches to educational reform brings the problems into proper perspective. The drive to hold teachers accountable for student achievement, as well as the efforts of parents to exert more control over the education of their children (home schooling, vouchers, charter schools) are largely driven by a concern with ensuring that students are better prepared to enter a rapidly changing work environment—and thus to enjoy the benefits of a consumer dependent lifestyle.

The massive financial effort to make computers the primary medium of learning is based on the assumption that cyberspace will be the venue for most of tomorrow's relationships, communication, and economic activity. The advocates of computer mediated learning justify marginalizing the role of public school teachers and university professors on the grounds that access to data better enables students to construct their own knowledge. Furthermore, as computers are being viewed as free of the misinformation and ideological bias of public school teachers and university professors, they are widely supported by advocates of the so-called "conservative" list of educational reforms.

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Before explaining the nature of the deep cultural assumptions that underlie these three often overlapping approaches to educational reform it needs to be pointed out that the liberal and radical approaches to educational reform, where the emancipation of the student from the influence of intergenerational traditions is the main goal, are also complicit in contributing to a lifestyle that is ecologically unsustainable. That is, emancipatory approaches to education undermine different cultural approaches to passing on intergenerational knowledge, including patterns of moral reciprocity, essential to less consumer driven lives.

Contrary to conventional thinking, emancipatory approaches to education do not represent an alternative to traditional approaches to education that further technological development and economic growth. What is seldom recognized is that the goal of educational emancipation is based on the same cultural assumptions that were the basis of the Industrial Revolution. These shared assumptions include the following: that change is constant, linear in nature, and the expression of progress; that the autonomous individual is the basic social unit and that attaining even greater autonomy is a constant goal; that anthropocentrism is the most efficacious way of relating to Nature. The connection between the ideal of the emancipated, self-directing individual and the form of subjectivity required by the Industrial Revolution can be seen in the way the individual who has been liberated from intergenerationally acquired knowledge, skills, and patterns of mutual aid is more dependent upon consumerism to meet daily needs.

These same cultural assumptions underlie what is mistakenly called the “conservative” educational reform agenda. With the exception of some approaches to home schooling and charter schools, the conservative reforms are also based on thinking of change as the expression of progress, the individual as self-directing and a competitor in the market place, and an anthropocentric way of relating to Nature—and that these assumptions should be adopted by other cultures as the basis of their future development. The more ideologically driven approaches to educational reform are also based on the assumption that the “invisible hand” that supposedly governs market activities will also ensure that the best will emerge from the competition between approaches to educational reform. While the label of conservatism goes unquestioned by the general public, the underlying assumptions upon which their educational proposals are based gave conceptual direction and moral legitimacy to the Industrial Revolution and were more fully articulated by Classical Liberal thinkers—neither of which contributed to conserving self-reliant communities, different cultural ways of knowing, and biodiversity.

Before explaining why the ecological crisis now requires that we adopt educational reforms that are genuinely conserving in nature, the ideological orientation inherent in computer mediated learning needs to be made explicit. Contrary to popular thinking, and to how they are represented in the media and by the computer industry, computers are not a culturally neutral technology. The culturally specific way of knowing reinforced by computers can be more clearly recognized by comparing the forms of knowledge and relationships that can be digitized with those that cannot be abstracted and encoded without being fundamentally

changed. The digitized forms of knowledge and relationships reinforced by computers include the following: (1) explicit and context-free forms of knowledge that can be represented as objective data and information; (2) a conduit view of language that supports the myth of objectivity and individually-centered rational thought; (3) the experience of being an autonomous individual who makes decision and value judgments; (4) a subjective perspective on what aspects, if any, of tradition and the future are relevant; (5) a taken-for-granted attitude toward the commodification of thought and communication; and (6) an anthropocentric perspective on human/Nature relationships

The following forms of knowledge, relationships, and experiences cannot be digitized and represented on the screen without being fundamentally misrepresented: (1) the tacit, contextual and analog patterns of daily experience—which vary widely among cultural groups; (2) the layered metaphorical nature of language—which includes the root metaphors that provide the meta-schemata that frames the process of analogical thinking and are encoded in the iconic metaphors used in daily discourse; (3) the culturally specific nature of intelligence and patterns of metacommunication that are the basis of moral reciprocity; (4) the differences in how members of different cultures experience the past and future as integral aspects of the present; (5) the face-to-face intergenerational knowledge that includes identity forming narratives, rituals, ceremonies, and mentoring relationships; (6) the embodied forms of knowing that connect thought and self-identity to the local landscape.

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The culturally specific way of knowing and communicating reinforced by computers has largely gone unnoticed by academics and members of the dominant culture, partly because of the widely held assumption that computers are a tool and partly because the cultural patterns reinforced by computers are identical to the conceptual patterns learned in public schools and universities. Indeed, a strong case can be made that computers reinforce the patterns of thinking and communicating that were the basis of the Industrial Revolution—and that the globalizing of computer mediated thinking now reinforces what has become the digital phase of the Industrial Revolution. Computers are used in many important ways, including their usefulness in eco-management projects. But they are nevertheless a colonizing technology that undermine cultural traditions not centered on individualism, consumerism and a material view of progress, and dependency upon technologies created by the increasingly close alliance between universities and international corporations.

Instead of educational reforms based on the environmentally destructive assumptions that that have guided the process of modernization over the last 300 or so years, we (and the world) need to adopt approaches to education that are genuinely

conserving in orientation. This will require basing educational reform on the following assumptions: (1) that humans are not separate and thus not in control of nature, but are integral and thus dependent upon Nature's self-renewing capacities; (2) that cultural/linguistic diversity is essential to maintaining biological diversity; (3) that intergenerational knowledge that strengthens the ability to live less consumer dependent lives must be given a more central place in the curricula of public schools and universities; (4) that curriculum reforms should contribute to democratizing decisions about the development and use of technology, and the priorities in scientific research. Eco-justice is the phrase that best takes these assumptions into account, as it represents a fundamental shift in how to understand the connections between education and the renewing of communities in ways that lead to a smaller adverse impact on ecosystems.

The aspects of eco-justice that can be addressed most directly by reforming our educational institutions include the problem of environmental racism, the disparity of wealth and political power between North and South caused, in large part, by the hyper-consumerism required by the economies of the North; the need to renew the intergenerational knowledge still retained by different cultural groups that represent alternatives to consumer and technology dependent lifestyles; and right of future generations to live in environments that have not been degraded. Addressing these eco-justice issues will require educational reforms that enable students to understand how language carries forward earlier ways of thinking that did not take account of how cultural ecologies are dependent upon natural ecologies. Curricular reforms also need to enable students to understand the ecological implications of print-based intergenerational knowledge that creates new forms of economic and technological dependencies, and the forms of face-to-face intergenerational knowledge that contributes to greater self-sufficiency and mutual aid within families and communities.

Specifically, this means helping students become more fully aware of the many aspects of daily life that have become commodified, and that contribute to the cycle of turning Nature into products that, after a short use, are returned to the environment in the form of toxic waste and every expanding landfills. In addition to surveying how dependent the average person has become on monetized relationships and activities, it is important for students to learn about the non-monetized aspects of community life. These will vary widely, depending upon cultural group. This requires learning about the forms of intergenerational knowledge, skills, and activities that are passed on in face-to-face relationships. Who are the elders of the community? And how are they different from older people still committed to the materialistic promise of success and happiness that has contributed to trashing the environment? Who are the mentors that can introduce the students to the arts, gardening, healing, and craft knowledge—and can model how to live more self-sufficient lives? What ceremonies, forms of entertainment, and nature-centered activities are still carried on within different cultural groups? Who are the storytellers who can help students obtain a more long-term understanding of the bioregion that sustains them. Stories of human hubris that have led to degrading the environment, as well as accounts of how others have lived by an environmental ethic, will help students understand how they are connected both to the folly and wisdom of previous generations, and to the land.

Learning about the face-to-face traditions still carried on within the different cultural groups that make up the student's neighborhood, as well as how to participate in activities that strengthen the bonds of community, is essentially a conserving activity. It contributes to the renewal of intergenerational knowledge, the nurturing of student talent, and the broadening of the student's awareness of alternatives to being dependent upon shopping malls and the media. By reducing the dependence upon a consumer, technology dependent lifestyle, it changes the cycle that leads to dumping toxic waste in the backyards of the most vulnerable groups. It also reduces the need to exploit the environments of non-western cultures. And in slowing the transformation of the environment into products that fill the shelves of shopping malls, it helps to ensure that future generations will find an environment that has not been devastated by the greed and folly of previous generations.

Eco-justice oriented educational reforms will contribute to reducing economic growth, which is now being forced upon us by global warming and other changes in natural systems. But this should not be viewed as lowering people's quality of life. Indeed, as more emphasis is put on participatory relationships and activities that expand personal talents and mutual interests, the quality of life will be expanded. As a writer from the Third World put it, we need to understand wealth in a new way. That is, wealth should be understood in terms of the quality of relationships and community-centered lives and not in terms of economic gains that degrade personal lives and the diversity of the environment.

While the educational reforms suggested here go against the grain of current thinking, they are based on the realities of the present—and not on the myths that co-evolved with the Industrial Revolution. The educational reform agendas of the so-called conservatives, the techno-optimists, and the emancipatory educators continue to be based on a set of myths that represent progress as a human project that is independent of what happens to the environment. To reiterate a key point, the emphasis on the individual as a worker and consumer, as a participant in cyberspace, and as engaged in the unending quest of self-realization and emancipation, will not be easy to change—or even for many people to recognize as contributing to the ecological crisis. We are now faced with a scale of environmental change that has led to the demise of previous cultures that failed to change their belief system and technological practices. We now need to engage in a serious discussion of the educational implications of global warming, which should focus on the basis of our belief system and not just on technological fixes. And we need to learn from other cultures, particularly those that have not taken the western path of economic development, about how it is possible to live without economic activities becoming the dominant aspect of our lives.

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