

ENVIRONMENTAL EDUCATION

Environmental education emerged in the 1960s as the term for the educational dimensions of the environment movement which, at that time, was concerned about air and water quality (pollution), the growth in world population, continuing depletion of natural resources and environmental degradation. Early definitions were framed as being aimed at producing citizens that are knowledgeable about the biophysical environment and its associated problems, aware of how to solve these problems and motivated to work towards their solution. Some proponents trace the roots of environmental education in the United States to conservation education and the liberal-progressive educational philosophies of, for example, John Dewey. Much of the activity in environmental education in the United States continues this tradition, and some writers attempt to truncate discussion of any alternatives.

Curriculum objectives relating to awareness, knowledge, attitude, skills and participation have been continuing themes in the development of the field of environmental education. One change of emphasis, however, has been in the scope of the environmental focus which has shifted from the biophysical environment to the total environment – natural and built, technological and social (economic, political, technological, cultural-historical, moral, aesthetic) – to the three pillars of sustainable development – environment, society and economy.

In the 1970s, as a result of the 1972 United Nations Conference on the Environment, the formation of the United Nations Environment Programme, and several UNESCO-UNEP intergovernmental conferences on environmental education, a set of goals and objectives for environmental education were agreed upon that have continued to form the fundamental principles for the field. However, through successive UN meetings, environmental education has evolved over past decades to have a contentious relationship with the more recently described area of “Education for Sustainable Development”.

Environmental education has been interpreted as both curriculum product and curriculum process. It requires a change in the curriculum content to include the knowledge and skills that were seen as an essential component of the area, but it is also a way of learning associated with changing attitudes, behaviors and participation in society.

A complicating factor for environmental education as both a product and a process has been that it does not neatly fit into any traditional subject areas of the curriculum, and its interdisciplinary or multidisciplinary nature has meant that it has often been marginalized in traditional schooling as a result.

Although there was an apparent consensus about the goals, objectives and guiding principles for environmental education in the period immediately following the 1977 Tbilisi UNESCO-UNEP intergovernmental conference, this consensus also included a dissatisfaction with what had been produced, which subsequently led to a variety of contestations about the field. These contestations include: the nature of the view of curriculum appropriate for environmental education, how environmental education is implemented in the formal curriculum, truncation of discussion on the nature of environmental education, the implications for education of the holistic nature of environmental problems, and the socially constructed nature of the environment and of education.

Some of the contestations had also occurred during the preceding 1975 Belgrade UNESCO-UNEP international workshop on environmental education. For example, many of the authors of position papers, who were mostly from the developed world,

reflected the biases of educational structures and environmental concerns of their countries. Their papers were about the curriculum and needs of environmental education without reference to the nature and special characteristics of the environmental situation itself: for them, environmental education was like any other subject or new theme in the curriculum. However, other participants from the developing world drew attention to the *raison d'être* of environmental education being the world environmental situation, and that the characteristics of that situation - not those of traditional education - should provide the framework and criteria for this education.

Increasingly through the years since the Tbilisi and Belgrade meetings there has been discussion of an appropriate educational paradigm for environmental education. While many persist in trying to accommodate environmental education within a traditional view of the curriculum, others have argued that there is a need for a different approach.

In his 1972 Ohio State University doctoral dissertation (published in book form in 1979), Arthur Lucas proposed a model for environmental education as being education *in*, *about* and *for* the environment which has become a mantra for the field. Subsequent discussions highlighted that while education *for* the environment most characterizes the intent of environmental education as being about motivating people to resolve environmental problems, this is readily converted to education *about* the environment at the classroom level and incorporated into the traditional curriculum. Environmental education as education *in* the environment or *about* the environment became common in school curricula in the Western world in the 1970s and 1980s. Environmental education as education *for* the environment and *with* environments developed more in the 1990s with the growth of socially critical education.

In the 1980s, an ERIC/SMEAC survey of U.S. state education agencies requesting information about how schools include environmental topics in their curricula found that environmental education is generally accomplished through “infusion” or “insertion” of discrete topics in association with science curricula, although a range of possible positions and mechanisms are possible. The more traditional forms of environmental topics - nature study, outdoor education and conservation education - were commonly noted, although energy education occurred more often.

A well-known example of this type of environmental education is Earth Education, as developed by Steve van Matre during the 1970s. This “green” approach is a self-proclaimed alternative to environmental education that aspires to be the educational arm of deep ecology. It aims to help learners build a sense of relationship with the natural world and to directly interact with the living things around them. Earth Education programs and activities encourage the development of sensory awareness and ecological concept building with particular emphasis on the “big picture” in understanding life. Earth Education explicitly rejects the “shallow environmentalism” of much conventional “nature study” and seeks instead to develop the kind of *identification* of humans with nature to which deep ecology aspires.

In contrast with the individualistic approach of Earth Education, a socially critical curriculum is conceived as engaging students in social problems, tasks and issues and giving them experience in critical reflection, social negotiation and the organisation of action, both individually and collectively. In a socially critical curriculum students are engaged in social practices and social structures immediately and not merely prepared for later social participation. The emphasis is on society and the individual in society, rather than just the individual, and is therefore a more “red” than “green” approach to ecopolitical action. The rhetoric of environmental education uses similar language. For example, UNESCO publications from around 1980 argue that environmental education

should adopt a critical approach to encourage careful awareness of the various factors involved in the situation, should involve students in planning their learning experiences, utilize diverse learning environments and a broad array of educational approaches to teaching and learning, and should provide opportunities to be actively involved at all levels in working toward the resolution of environmental problems. Thus environmental education has increasingly been seen by some of its proponents as concerned with developing a curriculum which encourages the practice of just, participatory and collaborative decision making and involves critical analysis of the development of the nature, forms and formative processes of society generally and of the power relationships within a particular society.

Critical pedagogy and critical curriculum theory have been subjected to criticism from a number of different perspectives. Chet Bowers, for example, has criticized critical curriculum theorizing for being anthropocentric and ignoring ecological imperatives; for accepting Cartesian dualism (thus separating mind/body, “man”/nature) and failing to adopt a holistic perspective; and for emphasizing personal empowerment through individual rational critical reflection while discounting the influence of tradition and culture.

Environmental education has also had a close but uneasy relationship with science education for much of the past four decades. Since its earliest inceptions, proponents have asserted that environmental education should become an essential part of the education of *all* citizens, because they need an understanding of their environment and because society needs a scientifically literate nation. The importance of citizens having ecological understanding continues to the present day as part of the goals of Education for Sustainable Development. However, while environmental educators recognise this relationship, many science educators do not.

During the 1980s many environmental educators recognized that the implementation of environmental education within the formal curriculum was not a simple task as it did not fit the traditional social reproduction curriculum. Its approach was seen as being interdisciplinary, which was difficult enough, but it was also concerned with values and providing social groups and individuals with opportunities to be actively involved in working towards resolution of environmental problems, which science (and many other) teachers did not feel confident to handle. Many people persisted in trying to make it fit by leaving out the difficult bits of values, participation and decision making but retaining the relatively uncontroversial ecological content.

One trend in the developing practice of environmental education in schools has been for teachers to begin by teaching *about* the environment (usually in a classroom setting). They may then progress to teaching both about and *in* the environment by going outdoors to investigate environments through such activities as data collection. They may also progress to teaching *for* the environment by working with students on local environmental action projects. A more radical socially critical pedagogy which encourages learning *with* environments has also been suggested. However, the involvement of students in environmental action is not yet common practice. The timidity of many teachers and schools in this matter is understandable (because environmental problems are invariably “politically sensitive”) but their fears are often groundless.

Many writers have recognized that environmental education is not achieving its overall aims, let alone its ecopolitical action aims, and have proposed alternative strategies. Proposals have come from both the “red” and “dark green” ends of the ecopolitical green spectrum. The “red” end (so labeled for its neo-Marxist affiliations) includes supporters of a socially critical orientation for environmental education. The

“dark green” end includes those whose vision of environmental education is informed by the values of deep ecology. A feminist perspective on environmental education has also been developed which spans the spectrum from “blue” (so named for its conservative affiliations) through “red” to “dark green”.

Proponents of environmental education have seen it as a movement which seeks to establish a new social order and promote the values which will hasten this change. As such it is more aligned with the social reconstructionist debate which saw schooling as changing rather than reproducing society. Such a view has continued with the 1987 World Commission on Environment and Development report arguing that the world’s teachers have a crucial role to play in helping to bring about the extensive social changes needed for sustainable development to be achieved.

The ongoing issues and challenges for the future of environmental education are numerous, but some points are clear. Firstly, the ‘environmental crisis’ won’t go away. Survey after survey indicates that there is sustained, and generally increasing, community concern about the state of the environment. Environmental groups, industry conflicts and political confrontations over the environment are a constant feature of media reporting. And the scientific community continues to remind us that the environment is in a continuing state of degradation. Whether schools have as their curriculum focus social reproduction or reconstruction, the environment should be looming large in their agenda. There is some general agreement that confronting the environmental crisis requires dramatic changes in people’s attitudes and behaviors towards the environment, and that education has a key role in achieving these changes.

Even though there is widespread concern about the state of the environment, and although environmental education has been on the political agenda in many countries since the late 1960s, the field has continued to operate on the margins of formal education. For example, from its earliest days, educational administrators have seen the field as being more of a political priority than an educational one. Its changing status with respect to national, state and local curriculum processes reflect changing political prioritizing of the environment as well as changing educational priorities, and its almost universal continuing uncertain status in the formal curriculum reflects its marginalization within the educational agenda.

The argument that environmental education is interdisciplinary - not fitting within the bounds of any traditional subject area in the curriculum - has also meant that no one particular subject area has owned it, and so it has often slipped between the cracks of the boundaries between the subject areas. Similarly, the arguments that it is concerned with critical analysis of society and involves political action have meant that many have been unwilling to become involved in implementing environmental education program. Teaching *about* or *in* the environment seems a lot less controversial, but the rhetoric says that it is only when there is education *for* the environment that environmental education is actually happening. Yet further marginalization can occur through emphasizing the attitude and action components of environmental education, rather than environmental knowledge, which can make some teachers uneasy.

In addition, policies and practices of environmental education have overlooked women through gender blindness, and this is another aspect of its marginalization, as is the silencing of indigenous peoples in the discourses of environmental education. A further problem is the individualistic orientation of much environmental education, which has tended to marginalize the field through its focus on behaviourism and individual agency.

The shift from environmental education to education for sustainable development – 2005-2014 is the United Nations Decade of Education for Sustainable Development –

has even further confused the identity of environmental education and its placement in the curriculum. While most would argue that we need 'it', many still argue about what it is and where it can fit into an already overcrowded curriculum.

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See also: Critical Pedagogy, John Dewey, Ecological Theory, Empowerment, Science Education Curriculum, Reproduction Theory, Social Reconstructionism

Further Readings

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