

CONTINUING EDUCATION

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Summary

This overview explains the important role of Continuing Education in providing environmental education and awareness training. The reasons why continuing education has a very significant role include: continuing and rapid change for example in the developing fields of environmental engineering and management; the varied backgrounds of individuals working in environmentally related occupations; the complexity of environmental issues requiring teamwork by individuals with different backgrounds; the transnationality of many environmental problems; and individual and community involvement in local, national and global environmental issues and sustainable development. These issues are illustrated in the case studies of both formal

and informal continuing education.

Case studies of formal continuing education described are: a distance learning postgraduate course in integrated environmental management; an international distance learning program in environmental management; and a leadership program. Case studies of informal continuing education described are: an environmental awareness program; and a program for practical environmental action by individuals and families.

1. Introduction

The purpose of this overview chapter is to explain the important role of Continuing Education in providing Environmental Education and Awareness. The term ‘continuing education’ is often used in different ways, so a brief explanation is necessary.

In this overview chapter continuing education is used to include formal and informal education and training received by the individual after full-time education in school and university has been completed. Two other related terms need brief explanation – ‘lifelong learning’ and ‘continuing professional development’.

‘Lifelong learning’ is a wide-ranging concept. The term is generally used to include all education and training activities undertaken by the individual throughout their lifetime. The European Lifelong Learning Initiative (ELLI) defined lifelong learning as:

“a continuously supportive process which stimulates and empowers individuals to acquire all the knowledge, values, skills and understanding they will require throughout their lifetimes and to apply them with confidence, creativity and enjoyment in all roles, circumstances and environments.”

‘Continuing professional development’ is usually used for education and training received after full-time education, that is directly related to the individual’s occupation. It is normally restricted to graduates or those with professional qualifications.

2. The Role of Continuing Education

Continuing education has a very significant role in environmental education. There are several important reasons for this including:

- Continuing and rapid change, for example in the developing fields of environmental engineering and management
- Varied backgrounds of individuals working in environmentally related occupations
- Complexity of environmental issues requiring teamwork by individuals with different backgrounds
- Transnationality of many environmental problems
- Individual and community involvement in local, national and global environmental issues and sustainable development.

In order to fully understand how continuing education contributes so significantly to environmental education, it is necessary to consider each of these factors in turn.

2.1. Continuing and Rapid Change

However good the individual's initial full-time education, rapid technological and organizational changes mean that it must be continuously reinforced by further learning throughout working life. This must happen if knowledge and skills are to remain relevant, individuals are to continue to be employable, and enterprises are to be able to adapt and compete successfully. Changes in the environmental field have been and continue to be especially rapid.

2.2. Varied Backgrounds of Individuals

Environmental work is undertaken by individuals with a wide range of full-time educational backgrounds. These individuals may also have a wide range of previous work experience. An individual may have a specialist degree or diploma in an environmental subject, for example environmental engineering, environmental technology, environmental science or environmental management. Alternatively an individual may have a specialist degree or diploma related to the natural environment or the built environment, for example biology, geology, geography, civil engineering. As part of such a specialist degree the individual may have studied some modules specifically on environmental topics, for example ecology, environmental planning, water resources. Environmental activities have become an integral part of many occupations. Consequently there are many individuals without environmental or environmentally-related qualifications who find that they have to undertake environmental activities as part of their work.

2.3. Complexity of Environmental Issues

Environmental issues are often complex. Teamwork by individuals from different disciplines and backgrounds is required for their study and for finding solutions. Consequently individuals often need to learn quickly about new topics in order to work effectively with colleagues from other disciplines. For example, the development of a new landfill site is likely to require inputs from a wide range of disciplines including geology, civil engineering, planning, ecology, chemistry and economics.

2.4. Transnationality

Environmental issues are often not only complex, but they are also transnational. Teamwork by individuals from different countries is required for their study and for finding solutions. Consequently individuals need to be able to communicate effectively with colleagues from other countries. This may involve understanding differences in the terminology used, appreciating different views about environmental issues, and considering different solutions to environmental problems. Such teamwork by individuals from different countries is becoming increasingly important. At the global level there have been events such as the United Nations 'Earth Summits' in Rio de Janeiro in 1992 and in New York in 1997. Unified environmental policies have been adopted by the European Union. International efforts can have some success as exemplified by the treaties concerning the Rhine River. The Rhine Action Programme agreed in 1986 by France, Germany, the Netherlands and Switzerland has produced

some measurable benefits, for example concentrations of heavy metals have reduced, and biological treatment of organic wastes has reduced oxygen depletion and fish kills.

The importance of international cooperation on transnational environmental issues is clearly exemplified in the case of freshwater resources. Effective water management requires a plan for the whole catchments basin and including both surface water and groundwater supplies. Many catchments basins are under the jurisdiction of several nations. Shortages of freshwater can lead to competition and international tension, as in the Middle East, for example reduced water flow and salinization affecting the Euphrates and Tigris are the cause of continuing disputes involving Iraq, Syria and Turkey.

2.5. Individual and Community Involvement

The Earth Summit in Rio de Janeiro in 1992 gave encouragement to individual and community involvement in local, national and global environmental issues and sustainable development. Although such individual and community involvement existed prior to that time, The Earth Summit not only recognized its importance but also set out in Agenda 21 actions to strengthen public participation in decision-making (see Box 1). “Cooperation”, “partnership”, and “education” are identified as key elements to strengthen public participation. The key role of local authorities is recognized: “As the level of governance closest to the people, they play a vital role in educating, mobilizing and responding to the public to promote sustainable development”. Agenda 21 emphasized the crucial role of education, public awareness and training (see Box 2).

“Critical to the effective implementation of the objectives, policies and mechanisms agreed by Governments in all program areas of Agenda 21 will be the commitment and genuine involvement of all social groups.

One of the fundamental prerequisites for the achievement of sustainable development is broad public participation in decision-making. Furthermore, in the more specific context of environment and development, the need for new forms of participation has emerged. This includes the need of individuals, groups and organizations to participate in environmental impact assessment procedures and to know about and participate in decisions, particularly those which potentially affect the communities in which they live and work. Individuals, groups and organizations should have access to information relevant to environment and development held by national authorities, including information on products and activities that have or are likely to have a significant impact on the environment, and information on environmental protection measures.

Any policies, definitions or rules affecting access to and participation by non-governmental organizations in the work of the United Nations institutions or agencies associated with the implementation of Agenda 21 must apply equally to all major groups.”

Box 1: Agenda 21 Section III Strengthening the role of major groups, Chapter 23
Preamble

“Education, including formal education, public awareness and training should be recognized as a process by which human beings and societies can reach their fullest potential. Education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues.....Both formal and non-formal education are indispensable to changing people’s attitudes so that they have the capacity to assess and address their sustainable development concerns. It is also critical for achieving environmental and ethical awareness, values and attitudes, skills and behavior consistent with sustainable development and for effective public participation in decision-making.”

“There is a need to increase public sensitivity to environment and development problems and involvement in their solutions and foster a sense of personal environmental responsibility and greater motivation and commitment towards sustainable development.”

“Training is one of the most important tools to develop human resources to facilitate the transition to a more sustainable world. It should have a job-specific focus, aimed at filling gaps in knowledge and skill that would help individuals find employment and be involved in environmental and development work. At the same time, training programs should promote a greater awareness of environment and development issues as a two-way learning process.”

Box 2: Extracts from Agenda 21 Section IV Means of Implementation

3. Types of Continuing Education

Traditionally continuing education has usually consisted of formal full-time or part-time university or college courses, or short-duration work-related training. In recent years, however, the range of available continuing education has expanded. Both formal and informal types of continuing education now exist. The range of different providers has also increased. Universities, the traditional providers for continuing education, are having increasingly to compete with other providers including consultants, businesses, government agencies, and non-governmental organizations. The wide spectrum of continuing education which exists is illustrated by the examples described below.

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Bibliography

The proceedings of the EuroEnvironment Conferences organized by the World Business Council for Sustainable Development include papers dealing with continuing education and training.

The annual proceedings of ENTRÉE contain papers concerned with environmental education and training, especially continuing education. These are produced by the EEE Network, Brussels, Belgium.

Biographical Sketch

Professor David Cawsey has an honors degree in Geology and a doctorate in Civil Engineering. He is a Chartered Geologist and a Fellow of the Geological Society of London. His wide experience includes working for central and local governments, higher education, and industry in engineering geology and subsequently in environmental engineering and management. He is the author of more than 50 publications in these fields. Other professional activities have included leading successful international environmental and training programs, and acting as external examiner and adviser for degree programs and doctorates. He now combines some university teaching with consultancy and professional activities.

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