SUSTAINABLE DEVELOPMENT AND THE PROFESSIONS

Summary

Professional bodies are beginning to recognise that sustainable development is a key issue for professional practice and the wider role of professionals in society. Since many professional bodies also define the curricula of degree programmes which provide the educational route to membership of the professions, this significant change in emphasis has far reaching implications for degree programmes in HE institutions. As part of this change process, 14 professional bodies have developed a common framework for sustainability to enable them to develop their thinking and practice. They have also developed a generic course on sustainable development for the professions based on systems thinking.

Introduction

All over the world professionals and practitioners in a wide variety of public and private sector roles have begun to explore the opportunities and challenges of sustainable development. However, exploration is not action. Meaningful change is only just beginning. For all of the debate about 'the Next Industrial Revolution', by and large we keep making, selling, using and disposing of the same products.

It is important to recognise that a significant number of professional bodies play a key role in defining the curricula of higher education programmes which prepare students for a specific profession. This is because many professions have been phasing out their own examinations and now rely on 'accredited' degrees as the educational route to membership.

In the UK a number of professional bodies have begun to recognise that sustainable development is a key issue to their members. Some, like the Engineering Council are actively revising and updating their 'Code of Professional Practice' and setting up working groups to discuss topics such as ethics, values and the sustainability agenda. This is good news, because most of the professional institutions (and educational institutions) have, until recently demonstrated considerable indifference to this issue. [1]

The Government's sustainable development education panel[2] has also set out a number of strategic goals for the professions. It recommends that by 2010 all professional bodies and industry lead bodies should have sustainable development criteria included within their course accreditation requirements.

Professional bodies are increasingly being asked to review their traditions and practice both radically and urgently to meet the needs of their existing membership. This has far reaching implications for those HE courses for which they control or influence the curricula. The challenge of sustainable development has profound implications for the engineering, planning, chemical, environmental, accounting professions and many others, in both the practice and role of the professional. For example, engineers are responsible not only for the safety, technical and economic performance of their activities, but they also have

[1] Environmental Responsibility- an agenda for further and higher education, HMSO 1993; Environmental Responsibility- a review of the 1993 Toyne Report HMSO, 1996

[2] Sustainable Development Education Panel- First Annual Report 1998. DETR, 1999

responsibilities to use resources sustainably; to minimise the environmental impact of projects, wastes and emissions; and to use their influence to ensure their work brings social benefits which are equitably distributed. These responsibilities heighten the importance of ethics in curriculum design and require greater emphasis on codes of conduct and the role of engineers as social change agents.

The key driver for much of this change is the significant shift in policy in the UK and elsewhere, from a focus on the environment to the wider context of sustainable development. This shift began in earnest in 1992, following the Earth Summit- when we heard more and more about the two apparently interchangeable ideas of sustainability and sustainable development. Both terms have acquired almost instantaneous status as desirable and essential, but few really understand what they mean in practice. This should not really surprise us because for nearly thirty years academia, policy makers and civil society have wrestled with the nature of sustainability and its implications for the economy and society. A useful summary of the issue is provided by Atkinson (1998)[3]

> *Sustainability is an ideal end-state. Like democracy, it is a lofty goal whose perfect realization eludes us. For this reason, there will always be competing definitions of sustainability. We know the definitions will always include the well being of people, nature, our economy, and our social institutions, working together effectively over the long term. But as the process of attempting to achieve sustainability will continually reveal new challenges and questions – pushing back the horizons, as it were – a definitive definition is impossible. Any indicator framework, therefore, needs to be flexible and adaptable to those changing definitions. It needs to grow as our understanding grows, while continuing to serve its purpose as a simplifier and guide to complexity. It needs to maintain a trail of continuity from year to year and decade to decade. Most important, it needs to speak to people in ways understandable both to the rational mind and the intuition.*

It follows that **sustainability** is the capacity for continuance into the long-term future, where as **sustainable development** is the process of moving towards this ideal end state.

Professional Practice for Sustainable Development

Professional institutions constitute a range of individuals whose beliefs and values towards sustainable development are mainly derived from their long education, training and experience in their basic discipline. These are reinforced through their professional networks. If there is to be a common approach for sustainable practice amongst professionals, then the framework and training for this needs to come through their professional bodies. The Professional Practice for Sustainable Development Initiative, sometimes referred to as PP4SD, arose out of this kind of thinking. Working with 14 professional institutions[4] the

[3] Atkinson, A. (1998). The compass of sustainability: Framework for a comprehensive information system. Version I.

[4] The professional institutions involved in this phase of the project are: Building Services and Research Information Association, Chartered Institution of Building Services Engineers, Chartered Institution of Water and Environmental Management, Chartered Institute of Purchasing and Supply, Institute of Energy, Institute of Waste Management, Institute of Chemical Engineering, Institute of Civil Engineers, Institution of Environmental Sciences, Institute of Mechanical Engineering, Royal Institute of British Architecture, Royal Institute of Chartered Surveyors, Royal Society of Chemistry, Royal Town Planning Institute.

project aims to help members improve their capacity to plan and carry out their professional duties in ways that support their achievement of sustainable development.

The project started in June 1999 with funding from the Environmental Action fund following an invitation seminar in March 1999 initiated and hosted by the EA and the council for Environmental education and its specific objectives are:

- To engage the participating professions in a learning process to develop a common curriculum framework for sustainable development.
- To develop, test and publish training materials derived from the framework appropriate to the needs of the professional institutions.

The PP4SD Framework

One of the first tasks of the project was to generate a framework for sustainability, to enable all of the participating institutions to 'apply' a shared mental model, when thinking about sustainability. The framework also sets out the limits (or boundaries) of sustainability and is based on high level principles which:

- Cover the whole area of sustainability
- Are essential but not prescriptive
- Are applicable over different scales and ranges of activity.

The framework has been derived from a number of key sources, including: The Rio Declaration, World Business Council on Sustainable Development, DETR, The Natural Step, The International Institute for Sustainable Development, the World Commission on Environment and Development, Forum for the Future and Natural Capitalism. At present given its evolving status it states that;

In a sustainable society:

1. *Any materials mined from the earth should not exceed the environment's capacity to disperse, absorb, recycle or otherwise neutralise their harmful effects to humans and the environment.*
2. *Synthetic substances in their manufacture and use should not exceed the environment's capacity to disperse, absorb, recycle or otherwise neutralise their harmful effects to humans or the environment.*
3. *The biological diversity and productivity of ecosystems should not be endangered.*
4. *A healthy economy should be maintained, which accurately represents the value of natural, human, social and manufactured capital.*
5. *Individual human skills, knowledge and health should be developed and deployed to optimum effect.*
6. *Social progress and justice should recognise the needs of everyone.*
7. *There must be equity for future generations.*

8. *Structures and institutions should promote stewardship of natural resources and the development of people.*

The framework can be used flexibly to identify and map the range and depth of information to be included in training materials for sustainable development. It also highlights the dilemma of sustainability, because it illustrates the issues of developing an acceptable quality of life using materials and energy for a growing population, whilst seeking to decrease society's harmful physical impact on nature. The framework is set in a **future** perspective and therefore offers a useful tool to help describe the gap between today's activities and the future requirements of a sustainable society.

Implementation

As far as possible any approach to sustainable development needs to encourage professionals to internalise the general principles set out in the PP4SD framework and to work out for themselves, the implications or applications, as they relate directly to their professional activities. In order to support this process the PP4SD project has published two booklets. Book 1, describes the project's objectives and the role of the professional institutions and partners and defines the framework. This was published in May 2000. Book 2 was published in September 2000; it is a general support document for use in the development of training courses and associated materials and tools to promote greater understanding of sustainable development within professional practice[5]. During the next phase of the project, a generic foundation course on sustainable development, based on systems thinking has been developed in partnership with the participating professional bodies. This has just been published by the Institution of Environmental Sciences[6].

The course materials are designed for use by trainers with professionals. Trainers can use them as presented or adapted as necessary for each occasion. They introduce the principles of sustainable development in a thought-provoking manner, requiring the participants to assess their own knowledge, skills and experiences within the context of sustainable development. Case studies from business and industry are used to illustrate how sustainable development principles are being applied. The materials have also been developed for inter-professional groups to ensure that a holistic approach to sustainable development is taken. The course aims to:

- improve awareness of the principles which underpin sustainable development
- examine the implications of applying the principles to their work and their lives
- enhance awareness of the benefits for business of applying the principles to their business activities
- assess a number of business case studies
- develop understanding of systems thinking and application
- increase knowledge of tools and techniques for applying sustainable development principles
- initiate personal action planning and implementation

[5] Further details of Books 1 and 2 can be downloaded from the Institution of Environmental Sciences web- site: www.ies-uk.org

[6] Bains J, Brannigan J, Martin S. 2001. Professional Partnerships for Sustainable Development. Institution of Environmental Sciences. ISBN 0-9540937-0-4

The materials and concepts have been trialled extensively through participative workshops in industry and the professions. The overriding conclusion was that a systems approach to sustainable development offers real opportunities for new ways of thinking and practically engaging with this complex issue.

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