Environmental Education Towards Personal, Professional and Societal Change: Possibilities for Distance Education

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In this paper I describe the design of distance education texts that encourage the kinds of student-tutor dialogue which 'industrial' methods of course delivery may find hard to achieve, and how such texts enable students and their tutors to be critically reflective about the theory and practice of environmental education in different cultural contexts. Aspects of the following are discussed - the limitations of 'new technologies' in resolving issues faced by distance educators; the potential of open texts in distance education; ways of supporting students in necessary critical reflection; the importance of social belonging for students, especially those of distance education courses in environmental education. The paper concludes with a series of suggestions for colleagues wishing to establish culturally sensitive, critically reflective distance education courses in environmental education.

The Notttingham Trent distance education course MA in Environmental Education is one of few such postgraduate courses in the UK. Its students are recruited from all levels of formal education as well as from a variety of non-formal educational contexts. Perhaps my greatest reward has been the chance to work alongside my students in trying to find ways to bring about environmental education in different socio-cultural and political settings. In what follows I offer insights gained from my experience in working in this course.

Distance education and new technology

" distance educators...risk neglecting the formulation of an educational rationale that responds to the needs of different ethnic and cultural groups. "

In basing their programs on technical and practical issues which focus on delivery mechanisms, materials production, hardware, student contact procedures, and so on, distance educators are often obsessed by various forms of the 'technological fix'. For example, they tend to ignore consideration of the traditional ways by which community groups learn through observation and imitative practice. Driven by computer and telecommunications technology their courses become constrained by what Giroux (1989) called the "technocratic rationality of education". The result is often a "pre-digested and spoon-fed curriculum" (Harris 1987), a dehumanised form of education in which the course materials are often seen by students as the curriculum which they are expected to absorb without question. This belief that "instructional industrialism" (Evans & Nation

1989) is the way forward in distance education is evident in the Open University's publicity for its MA in Open and Distance Education which declares that "the Open University leads the world in open and distance education", a claim stemming from the belief that electronic tutoring is the way forward for institutions seeking to extend their global reach for more students.

However, I do not wish to dispute the importance of technology *per se* to the recent rapid developments in distance education. But it is my impression that distance educators using the new technologies are often more concerned with economies of scale and industrial approaches to distance education than with the development of curricula that are adapted to the diversity of cultural and social identities of the participants. Some of my concerns have been expressed by Guy (1990) who alleged that distance education "precluded serious discussion of the cultural, political and economic nature and outcomes of distance education". This is an issue which has particular significance for students in economically disadvantaged countries, that it those often referred to as 'the South' or 'Third world' (Crump 1991), who might be looking to benefit from distance education programs sourced by higher education institutions in the economically advantaged, or 'developed', North. The distance educator's fascination for these new technologies is a particular example of what Arger (1987) was referring to in the "promise and reality" of distance education in the South when he wrote:

distance education's promise of being able to provide a quality, cost-effective education for the masses [sic] of the third world remains unfulfilled because the modernisation paradigm on which it is based consists of false assumptions.

That is, if distance educators continue to assume that modernisation of distance education is merely a matter of

equipment and technique, they risk neglecting the formulation of an educational rationale that responds to the needs of different ethnic and cultural groups. Such a formulation I believe to be facilitated by adoption of an approach called the 'open text'.

The open text and cultural inclusivity

Printed matter is the raw material to which students respond in most distance education courses. Some students may see these written materials as manifestations of the power and autonomy of the tutor, a view which can have consequences for the tutor-student relationship. Lacking the immediacy of face-to-face engagement, these course materials can "regulate the forms of discourse in which the students can engage" (Evans & Nation 1989), for example, by imposing values and understanding from knowledge stocks that are unfamiliar to students in their own cultural contexts. Should distance education operate in this way, it can foreclose students' readiness to engage in dialogue with their tutors and perpetuate a tutor-centred approach to learning in which students have little option but to conform to tutors' norms and practices, and thereby be denied any consideration of their professional needs and cultural contexts.

'open...materials encourage students to take advantage of the circumstances and events that are of significance to them'

On the other hand, a student-centred approach that views students as collaborative developers of their own courses requires the written materials to be 'open'. By 'open' I mean that the materials encourage students to take advantage of the circumstances and events that are of significance to them.

By writing student materials that comprise open texts, the course tutor can avoid any 'tutor-proofing' of texts that forces students to adhere to tutor expectations. For example, when faced with a module assessment that invited her to investigate the 'hegemonic hold' of post-industrial society on current social thought and its implications for the formulation of environmental education for local communities, an MA in Environmental Education student in Colombia protested that indigenous Indian communities have little experience of what an industrial society is, let alone a post-industrial one, and questioned the relevance the task had to her. However, the student was able to negotiate a form of assessment that met the general criteria for module assessment but allowed her to explore the local impact of the international language of globalisation and development on the economic and social sustainability of local people with whom she works. My regard for written materials that are 'open texts' is confirmed by Harris (1991) who maintained that, in relation to the U.K.'s Open University Masters courses for serving teachers, open texts allow students to bring their own practical experience of teaching to the interpretation of resources about teaching and, in so doing, challenge the authority of the materials and develop their own critical stance. The implication of this is that some students, such as the one discussed above from Colombia, may choose not to engage fully with a theoretical analysis which does not sit comfortably with the day-to-day demands on their practice (Thorpe 1993). This view is endorsed by Evans and Nation's (1989) claim that interactive, participatory and dialogic distance education materials, that is ones involving tutor-student and student-student 'chat' activities, lessen the tension between wanting to develop students' capacity for critical reflection and the tendency to subjugate them by text and distance.

The open texts at the heart of the MA in Environmental Education course recognise that students are key agents in their own learning. This makes the course fundamentally different from ones in which the ownership of the knowledge is firmly in the hands of the course designers and in which students are allowed little opportunity to participate in the construction and transformation of the study materials in ways that have real meaning in the particular socio-political contexts in which they live and work. As Wexler (1981) asserts, "the open text...is a process of activity rather than a dead object...which is a form that teaches activity rather than passive consumption as its message." It counters the tendency for technology to drive developments in distance education through rational and instrumental approaches that are liable to ignore the cultural context, learning styles and needs of students, and it allows the learners to generate their own questions and goals. Good course designers are sensitive to the 'fit' between their course materials and the cultural situations of the students. It is in this cultural context that distance education texts have relevance and survive if they relate to community interests, practical knowledge, and emphasise collectivism, group learning, dialogue, co-operation and agreed forms of knowledge (Guy 1990).

The following example illustrates how the idea of the 'open text' has been operationalised in the MA course materials. It is taken from the Module 2 Study Guide and centres on students' understanding of and relationship to Nature as a basis for framing their 'environmental ethic'. The Appendix to this paper shows the location of this module within the MA.

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Module 2

Perspectives on the Environment: Differing Ideologies and Utopias

This module explores the changing relationship between humanity and Nature over time. It also seeks to help students formulate their 'environmental ethic' in an early attempt to provide grounds for a professional purpose to their studies. For example:

2.5 Student Activity: Thinking About YOUR Environmental Ethic

At this stage, we would like you to begin to consider in detail how you see your relationship with Nature. Describe in whatever way you think appropriate how you value Nature. One suggestion would be to outline some practical ways in which you relate and respond to Nature and then to consider how these illustrations can help to formulate the beginning of your own environmental ethics theory.

From this first draft of your own environmental ethics theory, can you begin to pinpoint the main principles/considerations you might want to use in some more general theory of environmental ethics with other members of the MA group?

The text in this example is 'open' in that students, by responding to the ideas presented in their prior reading, are encouraged to engage actively with the text rather than be passively involved in its 'consumption'. This example acknowledges that some views of Nature may be markedly different from the dominant Western view which is conditioned to see Nature and culture as independent rather than interdependent as, it is often supposed, is the 'view' of indigenous peoples (Milton 1996). Students are asked to question the meaning of Nature in this example, not to explore its culturally determined meaning in any depth but to underline the need for distance education tutors to be aware of the differentiation of cultural perceptions of such arguably well understood Western notions as 'Nature'. Such concepts and understanding may be unwittingly or insensitively written into distance education materials on the assumption they are cross-culturally invariant, that the text as constituted by authors in one cultural context is automatically relevant to another. In relation to environmental education it is essential to prepare course materials that encourage understanding and decision-making about environmental issues at the local level. For example Bak (1995), in arguing that environmental education in Southern Africa should respond not only to traditional conservation ethics but also to the very real needs of the majority of South Africans for economic development, wrote:

Generations of indigenous Africans have lived in intimate contact with the natural environment...a direct source of food, fuel and medicine for centuries

...To ignore or denigrate local communities' environmental knowledge and practices is to run the risk of both arrogance and failure.

Distance education tutors need to be aware of the cultural history of the participating students, for as Adams and McShane (1992) observe in relation to environmental conservation in South Africa:

The entire modern conservation edifice rests on the ideals and visions of people other than Africans. The great majority of Africans now active in conservation were trained in the traditional Western methods of wildlife management, thus perpetuating a system created in Europe at the turn of the century and inhibiting the growth of an African conservation ethic.

These tensions arise in the MA in Environmental Education program which is being accessed by students in Southern and East Africa, and other 'developing' countries, where it is necessary to encourage students to reflect critically on their particular social and colonial history.

Sustaining critical reflection

As explained above the open text not only encourages a collaborative student-tutor learning environment but also enables the primary aim of the MA in Environmental Education to be realised. This aim is "to facilitate the critical practice of educators and enable them to foster the social conditions for realising a sustainable society" (Plant & Firth 1994). My concern that environmental education needs to be based on critical reflection contrasts sharply with the research, development and dissemination model of curriculum innovation. The decisive difference between these two approaches lies in the way knowledge is dealt with. What is important is not simply how environmental educators engage with elements of traditional culture in order to improve their practice, but how the material and ideological resources of culture are reflected in practitioners' action and knowledge; hence the practitioners' knowledge is not primarily transmitted, but "self-developed" (Altrichter 1989).

environmental educators need to become 'transformative intellectuals'

The open text format of the MA in Environmental Education encourages students to reflect critically about their learning. Critical reflection assumes that the central purpose of learning is an on-going critique of it, with a view to improving that learning. In the MA course such a critically reflective approach is intended to enable students to gain insight into their own and other people's understanding of the origins of environmental issues. These insights will then enable them to elaborate and evaluate

educational frameworks that are effective in developing their roles as environmental educators in their different professional fields and cultural contexts. This implies that understanding about methodology, theory and practice of environmental education is developed through dialogue (Robottom & Hart 1993, Janse van Rensberg 1995). Environmental educators can then begin to understand the social origins of environmental degradation and to be fully involved in the social changes needed to improve human-environment relationships. It is through critical reflection that environmental educators can challenge the notions of rationality, efficiency and productivity which dominate in the developed world and which result in an objectivist and instrumental approach to education. The idea that MA in Environmental Education students should strive to be critically reflective draws from critical theory (Habermas 1972, Kemmis 1986, Carr & Kemmis 1986) and the work of Giddens (1984) in recognising that culture and social structure are constructed and reconstructed through history by the people who share and occupy them, and that people are themselves shaped as social beings by the cultural conditions which surround them. To overcome impediments to social change that leads to improved human-environment relationships means that environmental educators need to become 'transformative intellectuals' (Giroux & McClaren 1989, Huckle & Sterling 1996) who are committed to working towards active community participation in the understanding and resolution of environmental issues.

A learning environment that nourishes critical reflection is not easy to achieve. The main constraining influences on students' ability to be critically reflective arise from their educational and cultural contexts. For example, this happens when the work of students is encumbered by national curricula that marginalise environmental education by emphasising a classroom competency or skills model of classroom practice. Also, students in countries such as South Africa, which has experienced a long period of colonial rule in a racially-divided society, do not easily make the transition to participatory forms of study that encourage self-expression and critical reflection about their social conditions. One way the MA students are assisted in beginning to see ways of changing the social conditions that may constrain the development of effective forms of environmental education is by asking them to keep a 'research diary'. This diary not only records responses to activities in the Study Guides, but also provides a reservoir of reflections which continues to grow throughout the course and which contributes to students writing their research dissertation. A student who was asked as part of the assessment for Module 6 to comment on her experiences of the course so far wrote:

I have found that the structure and content of the modules have been effective both in informing me at an intellectual level and encouraging me towards greater reflection, critical insight and analysis of my professional practice and work context. Alongside this, the close interlinking of aspects of environment, education and enquiry has necessitated from me

very personal engagement and responses. Many of the student activities have challenged at a personal level and, although the issues are difficult ones with which to grapple, I am grateful that they have probed deeper than the merely academic or 'impartial' (dare I say, 'objective'?) response.

This student refers to the student activities as encouraging her to 'greater reflection, critical insight'. The following extract from Module 7 provides an example of how this is achieved.

Module 7: World Politics and the Global Environment

This module emphasises the importance of the global perspective and the need for students to explore and articulate their own value positions through a critical review of selected literature offering perspectives from a variety of international standpoints; it includes an examination of the implications of globalisation, sustainable development, gender and development for the role of environmental education in the contexts in which the students live and work. For example:

7.1 (a) Student Activity: Questioning Assumptions

Having read the introductory section, you are asked to give your initial reactions to what has been said with respect to:

1. The underlying assumptions of the inter-governmental reports.
2. The de-professionalisation of educators.
3. A socially critical orientation to environmental education.
4. The idea that we are in a period of transition. Is it towards a postmodernity or a second modernity, what has been called a reflexive modernity, or something else? Summarise your thoughts on this central debate within social theory.
5. The argument put forward by Elliott (1993) that it is intellectual rather than environmental values which define the learning process and justify giving environmental education a central role in mainstream education.

What are your critical responses to the 5 ideas above?

- What is the role of education for improving the capacities of people and societies to address environment and development issues?

- Can education contribute to processes of social change?

- Is critical pedagogy consistent with the recent framing of environmental education within the intergovernmental reports?

The texts produced for the MA in Environmental Education incorporate a variety of formal assessment tasks grounded in students' professional and vocational contexts, all of which allow the student to generate their own questions and goals, then seek out information and experiences to address those questions.

Social belongings—for environmental educators and for students

'it is...important that distance education students gain a sense of social belonging to a course in which they are participating as collaborative learners'

In order to be able to create and sustain collaborative learning environments between the students and myself, I have needed to know something of my students' characteristics and backgrounds. What are their aspirations —for themselves, for others and for the environments of their own locality and of the Earth? What are the particular cultural and social circumstances in which they live and work? How do they see me, the course tutor, and what role do they want me to play? Of course, in any multicultural classrooms these are questions that educators in face-to-face situations also need to ask, but such questions have particular significance for distance education students if they are to have a sense of 'belonging' to the course as well as experiencing a wider sense of involvement with the communities in which they practice environmental education. The importance of this social dimension to students' studies has been recognised by Benton (1993) who argued that environmental educators' concern and action for the environment needs to relate to their sense of personal identity and social context:

> [An environmental] feature is significant and valued in virtue of patterns of meaning and cultural values which individuals are able to deploy and apply only in virtue of their social belongings. The integrity of social cultures and communities are therefore indissolubly bound up with the identification of individuals with their environments. (My emphasis)

'Social belongings' means, I think, that environmental educators in contexts and cultures different from my own need encouragement to produce 'home-grown' environmental education programs, socially rooted and responsive to traditional knowledge and culture and which encourage them to analyse the conventional wisdom of their society, politically, economically, and ecologically in the interests of the environment. When this happens, students are reflecting on their practice and taking appropriate action to change this practice. But I think it is also important that distance education students gain a sense of social belonging to a course in which they are participating as collaborative learners. In the MA in Environmental Education several techniques are used for bringing students 'inside' the course and giving them a sense of belonging. This begins for them at the start of the course when they are asked to identify a 'critical friend',

a person to whom they can refer for comment on their work from time to time and who shares their aspirations for personal development and a critical understanding of environmental education. During the course processes the students know that they have a clearly defined channel of communication to me using phone, fax and e-mail as well as, of course, postal systems. Thus I am able to monitor their progress through the modules and maintain regular tutorial contact. I also invite students to Nottingham to a day school every three-months to meet their peer group and the tutors. A newsletter, 'EarthLink', helps to keep students in touch with each other as well as updating them on, for example, course administration details and content, and methodological and research issues.

In addition, in the first module of the MA in Environmental Education students are asked to write their 'ecological autobiography' in which they draw on their own life experiences, especially the experience of childhood, when developing a personal commitment to environmental education. The justification for this piece of work is that our present lives continue to be shaped by our recollection of events and experiences. Thus, whilst each of our lives is a "continual autobiography" (Cobb 1977), it may be that our formative years are particularly influential in establishing the ways we respond to the environment in adulthood. Roszak (1993) maintained that one's capacity to delight in Nature at an early age need not have been in response to concerns about the environment but to a "deeply submerged loyalty" that binds us animistically to the natural world and which eventually shapes the positive attitudes to the environment we may have in adulthood. Thus George Eliot (1880) is unequivocal in claiming that:

> We could never have loved the earth so well if we had had no childhood in it...What novelty is worth that sweet monotony where everything is known and loved because it is known

Thus students are urged to answer questions such as: How did I become interested in the environment? What do these recollections mean to me in my current practice? How might I develop my practice differently? These questions are intended to reveal the extent to which students consider such experiences, especially childhood experience, as a necessary prerequisite to developing an affection towards Nature. The individual ecological autobiographies are bound and sent to all students who are encouraged to make contact with members of their group and to reflect on and revise their recollections throughout the course. The ecological autobiography is assessed as part of the formal assessment of the first module and is framed as follows:

> **Module 1**
>
> *Coursework: an ecological autobiography*
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> As a way of exploring your own understanding of environmental interests and concerns, and as a way of introducing yourself to others, you are asked to write a short, 3 to 4 page 'ecological autobiography'. This should include:
>
> 1. Your name, address and telephone number.
> 2. A recent photograph.
> 3. A brief history of yourself which attempts to capture your interest in environmental education by the recollection of experiences that you think have shaped your present concern for the environment; and why you have enrolled on the MA program.
> 4. Your present situation: e.g. personal, work, other interests.
> 5. A justification of your present value-position in terms of the environment, environment-development issues and environmental education.
> 6. Your expectations of the program.

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⁶Who will conserve or defend what they have not learned to love?⁹

Students have valued the ecological autobiography for different reasons. For example, one of them wrote: "I first became interested in this area of research when asked to write my own ecological autobiography as an introduction to the first module of the MA course in Environmental Education. I found it a rewarding exercise, which enabled me to reflect on the experiences which have helped shaped my human-Earth relationship". Another student, who worked as an educator at an environmental centre Gloucestershire, in recognising the value of her own childhood experiences spent in Nature wrote "it remains one of the priorities of the environmental education team to provide for children and young people essential environmental experiences of the natural world". Her comment is underwritten by her recognition that as the cities and suburbs abandon their natural diversity and their citizens grow more removed from personal contact with Nature, awareness and appreciation of it are diminished. What is the extinction of the tiger to a child who has never seen a hedgehog? Who will conserve or defend what they have not learned to love? If, as Wilson (1995) maintained, "the very essence of what we are today is rooted in past experiences", MA students need to evaluate how those experiences that are directly related to the natural world influence their understanding of the causes of environmental damage; only then will they be able to understand fully the possibilities for a more passionate relationship with the natural environment.

Summary

I have argued that environmental educators planning distance education programs should be circumspect about offering course materials that

- are over-reliant on new technologies for course delivery and assessment, and

- constitute a 'closed' tutor-centred model of learning that discourages student-tutor dialogue.

What has been advocated here is the writing of distance education texts that are 'open' so that the students and tutor are engaged in a reciprocal teaching-learning, action-reflection process which leads to a better understanding of ourselves and the social conditions in which we work (Evans & Nation 1989). I have provided some evidence of how the MA course in which I work has been designed and negotiated to enable these critical processes to evolve and to achieve the interaction between theory and practice that keeps both the students and myself responsive to changing social, educational and political circumstances that have a bearing on the evolution of environmental education.

Finally, I offer the following suggestions to readers planning open texts that encourage reflective practice and collaborative learning in distance education programs for environmental education:

- develop texts and other course materials that encourage critical debate about environment and development issues significant in the students'cultural contexts.

- build in negotiable models of assessment that help students to develop home-grown environmental education programs contributing to change at grass-roots level.

- write the texts with an understanding that contexts in which the materials are used are strictly related to the way the course is designed.

- remember that in some cultures colonial rule means that people have not been encouraged to change; conformity to rule has been rewarded and taking an initiative has been punished (Dent 1996).

- consider setting up local student friendship groups and tutor support networks (Plant 1996); consider asking students to identify a 'critical friend'.

- sustain collaborative learning/teaching relationships via phone, fax, mail, e-mail or other means.

- allow instruction and learning goals to emerge during the running of the course. Just as environmental content cannot be fully captured, learning goals cannot be fully pre-specified and disassociated from the actual learning context. ☼

Acknowledgments

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Appendix

The diagram below shows that the MA in Environmental Education has a modular structure in which students are able to claim an Advanced Graduate Diploma after completing the first six modules and an MA after completing the next six modules which includes a 4-module, 12 000-word dissertation. Each module is assessed and there are no written examinations. Normally students receive their Study Packs every seven weeks though students can work at their own pace, paying for and completing individual modules without necessarily committing themselves to the whole program.

Each Study Pack comprises a Study Guide, photocopied materials, textbooks and other materials, for example a Research Diary and Student Handbook. An optional module Independent Study Module can replace Module AN3, and modules more relevant to Southern and East African environmental education are being commissioned. Three strands, environment, enquiry and education provide the students with an holistic framework with which to integrate their studies during the program and beyond.

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Faculty of Education—MA in Environmental Education

Program structure for the first six modules
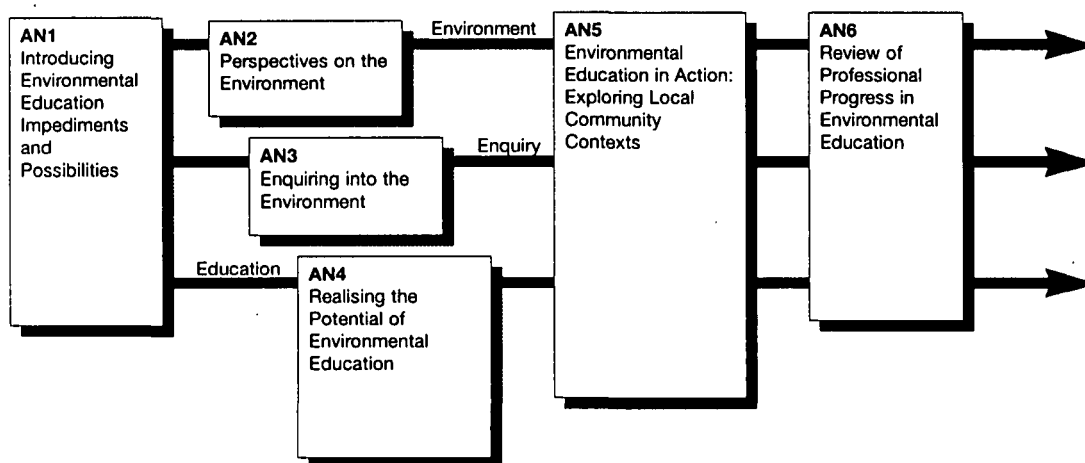
Program structure for the second six modules