

TOWARDS SUSTAINABLE CONVERSATION: DEVELOPING ENVIRONMENTAL EDUCATION PROCESSES

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This paper highlights the importance of seeing environmental education as a process and considers the value of conversation and storytelling in environmental education processes. These processes are explored from a post-structural perspective within the context of the writer's own involvement in supporting environmental education processes.

INTRODUCTION

There can be little doubt that we are living in a time of environmental crisis: South Africa's environmental problems include widespread poverty, unemployment, water shortages, air pollution and soil erosion, to name a few (Yeld, 1997). The varied nature of the crisis means that everyone is affected in some way, although some suffer impacts more directly, and some are better equipped to deal with adversities, than others. One of the responses to the environmental crisis is environmental education.

This paper explores why it is useful to think of environmental education as a response to this crisis, an attempt to improve the quality of life on our planet and a process to improve education. It highlights the importance of seeing environmental education as a process and considers the value of conversation and storytelling in environmental education processes, claiming that they have a role to play as "forms of research that honour the spontaneity, complexity and ambiguity of human experience" (Hart, 1996:34).

The paper is written out of my involvement in the compilation of Share-Net resources, workshops with teachers, and assisting with coordinating regional Wildlife & Environment Society of South Africa (WESSA) environmental education projects, and research. Share-Net is a loose collaboration of individuals and organisations working to produce low-cost environmental education resource materials. Materials are printed and sometimes edited and compiled at the Share-Net offices at the WESSA's Umgeni Valley Project near Howick in KwaZulu-Natal. Good resource materials that can be adapted for local conditions are an important part of supporting environmental education processes.

As views of the concept 'environment' change so do responses to the environment crisis: the variety of methods in environmental education relate to the different ways we see the environment. In a Share-Net

booklet *Environments & Methods*, O'Donoghue and Janse van Rensburg (1995) introduce an unfolding story of changing views of the environment and the associated changes in methods of environmental education. The environment was initially seen as natural ecosystems and early responses to the environment crisis thus focused on protecting endangered wildlife in nature reserves. It was assumed that people needed to be taught ecology and be made aware that nature was at risk. Early fieldwork methods included show and tell, experiential learning, quiet reflection (solitaire) and guided questioning. Problem environments such as cities with industries and pollution were also an early focus with learners researching environmental issues for projects. The assumption was that if people became better informed and more aware they would then do something about the problems. Environmental education in WESSA was closely aligned to these trends with schoolchildren visiting nature reserves such as Umgeni Valley Project for field excursions and 'nature experiences' from the 1970's onwards.

Gradually the environment came to be more broadly perceived than biophysical processes. Environmental problems have political, social and economic implications too, and people rather than nature or problems, came to be central to environmental education methods. Environmental concerns in WESSA broadened too and in 1996 the name of the organisation was changed from the Wildlife Society to the Wildlife & Environment Society of SA to more accurately portray the Society's activities.

As views of the concept 'environment' broadened, action research with, for example, low-cost water testing kits for schools, was used more widely in environmental education. In a case study of the water test kits, Taylor (1997:91) notes how "enthusiasm to find out jointly with participants, rather than field work to cause change in the participants led to richer field work experiences". The kit can be used to support better education processes but not to direct

social change; for meaningful field work learners can talk about what they discover (dialogue), monitor water quality (encounter) and think about water quality issues (reflection) (Taylor, 1997). The enthusiasm and disposition of the individual who is sharing the resource are also key factors in the effective use of the kit (Taylor, 1997), and indeed in all environmental education processes (Robottom, 1996). This belief contrasts with the more common technicist attitude: "... if I can only learn the right techniques I can do environmental education" which implies that there is one correct procedure that can be applied to any situation. In our experience techniques and attitudes such as this seldom, if ever, contribute meaningfully to environmental education processes.

Current local developments include computer networking between schools in the KwaZulu-Natal midlands. Small local projects such as the water *indaba* which involves a number of individual teachers, groups of school children, and organisations (in this case, NPB and WESSA) can contribute meaningfully to environmental education processes.

ENVIRONMENTAL EDUCATION AS A PROCESS

It is more accurate to talk of environmental education processes rather than environmental education as a 'thing' such as a subject or field of study. The 'processes' addition draws attention to the multiple forms of environmental education, the evolving fluidity of the concept and the open-endedness of environmental education aims and methods (Wals & van der Leij, 1997; Robottom, 1996). Environmental education processes differ in different contexts; thus it is appropriate to talk of processes which arise to take appropriate shape in differing situations.

This view of environmental education as processes contrasts with the more conventional view of environmental education as a thing, product or tool. Wade (1996) describes the dominant approach to environmental education today as a 'fast food' approach of spoon-feeding pre-packaged activities through effective marketing and dissemination of products that treat all teachers, students and communities alike. This approach neglects the rich learning opportunities afforded by local community contexts and through involving teachers in curriculum development. Dissemination of water testing kits without local support is an example of this 'fast food' approach. I was involved with others from WESSA and NPB in a number of workshops and in support-

ing the water *indaba* for networking among schools (described above) in an attempt to prevent the Department of Water Affairs & Forestry's centrally distributed water audit buckets becoming environmental education fast food. This could have happened had the buckets simply been delivered to schools without an introduction or any follow-up support.

An advertisement for an international training course in environmental education to be offered by the North American Association for Environmental Education (NAAEE) in October 1997 is a good example of environmental education as a product. It claims that "environmental education seeks to provide individuals with the knowledge, skills and motivation necessary to make well-informed decisions regarding environmental quality and the use of natural resources" - the implied 'we know best and will inform you' is well illustrated in the logo of a large mother bird feeding a young one. Environmental education is regarded as a product that needs to be passed on through effective marketing, so the course offers to teach "social marketing methodologies proven highly effective in raising public awareness and motivating individual behaviour change". I have noticed this expectation in many students on environmental education courses of environmental education as something that can be learned and applied. Recently students reflected a technicist understanding of environmental education when they commented that the course they were evaluating had not given them the skills (a particular methodology rather than flexible competencies) to do environmental education, as if there is a universal technique which can be acquired and then applied to all situations.

Jickling (1997) suggests that in order to change our approach from environmental education as a product to environmental education as a process we should stop using definitive and conclusive words such as 'the', 'only' and 'ultimate' in defining environmental education. He also suggests not thinking of definitions simply as "products, but also as processes in which teachers, administrators, academics and scholars are all participants" (p. 100). When environmental education is regarded as a process, we need to recognise how we are part of that process and write ourselves into the text. A clear example of this is the Gold Fields Participatory Course leading to a Rhodes certificate in Environmental Education: The experience of the course differs enormously each year. It would in any course as students change, yet the

inherent participatory nature of the Gold Fields course necessitates students consciously writing themselves into the course based on their experiences at work; the final assignment, for example, is the development of a resource or programme that will be useful in the participant's work and the assignment has to be presented to the group.

In the light of the above discussion I feel it would be inaccurate to describe my work as 'doing environmental education'; rather, I am involved in 'supporting environmental education processes'. 'Doing environmental education' implies colonising a social space with one's own idea(s) in a way that could inhibit environmental education processes (O'Donoghue, pers. comm., 1997). It is more appropriate to join in an environmental education process, to be part of a team to which each person or group brings their wisdom and experience to enable environmental education processes to arise within a variety of contexts.

THE SECOND 'E' OF ENVIRONMENTAL EDUCATION

In our concern for environmental issues, the educational component of environmental education is frequently ignored. Wade (1996:14) comments on this tendency to neglect the second 'E' of environmental education, as do Jickling (1997) and Robottom (1987:199) who notes that "the educational context has been taken for granted and too widely ignored". It can be tempting to focus on environmental content rather than educational context through concentrating on the facts themselves while ignoring the way in which information is shared. What to teach is emphasized far more than how to teach, or why to teach in this way (see, for example, the Council for the Environment's *Development of a Core Syllabus for Environmental Education in South Africa*, 1993)

It is possible to think of environmental education as a challenge to conventional education or as an "effort at comprehensive educational reform" (Robottom, 1996:15). There are many opportunities for environmental education processes to enrich formal education systems. Share-Net booklets and other resource materials have been developed as a response to the perceived need for low-cost resources in South African schools. As such they contribute to enriching a particularly impoverished education system. In an attempt to clarify the difference between environmental studies and environmental education, Lotz (1996:166) comments that "what seemed significant to (her) is that environmental education is seen as

nothing but good education". From this position it is useful to think of environmental education as a process of engaging with education so as to develop better education.

It is also possible to take a socially critical perspective of schooling whereby students are provided with a "map of the existing culture and society and a map of what a better society might be like" (Kemmis, 1993:301). Often environmental education processes are socially critical and contradictory to some conventional education with narrow purposes of social reproduction, or maintenance of the *status quo*. Then environmental education processes serve to challenge traditional education which strives to 'smooth' while environmental education 'stirs'!

I am currently involved in a research project with a group of B.Ed. students at the University of Natal, Pietermaritzburg, who are studying an environmental education module taught by Jim Taylor. The course asks students to challenge their assumptions and question their practice; students have to reflect on their own teaching practice through class discussions and mini-assignments submitted each week. I am sure this is different to what students expected from the course: they were at first concerned with content and information about environmental issues, but reflection on the use of resources and teaching practice means that course definitely deals with the second E of environmental education too!

Fien (1993) explains a socially critical orientation in education as one which makes students aware of ideological constraints and unequal power relations and encourages action in the interest of social justice. He describes knowledge as socially constructed through a dialectical interplay of subjective views. It has its meaning in specific contexts and is subject to reconstruction through historical and political processes. This social constructivist-interactionist view sees learners constantly reconstructing a social reality. Socially critical environmental education processes, then, are processes of 'contextual reconstruction' (O'Donoghue, 1991) with the characteristic feature of "reconstructive co-defining of the way we see the world". Developing stories together would be another way of seeing this process.

ENVIRONMENTAL EDUCATION AS A STORY-TELLING PROCESS

"the universe is made of stories, not atoms"
(Gough, 1993:615)

It is possible and useful to think of the concept 'environment' as comprising a multiplicity of texts or sto-

ries. Stables (1996) argues that, though it is not common to regard the physical world as text, textual studies offer a valid means of studying the social construct that we know as 'environment'. Environmental Education processes that respond to this view of the environment would be poststructural in nature. The poststructural perspective explores the power that language has to organise our thoughts and experiences, as well as making us think about the things we usually take for granted (Janse van Rensburg, 1997). Cheney (1994:205) introduces the notion of 'storied residence' to describe "the range of culturally constructed sites in which subjectivities reside". Gough (1994:207) takes this a step further by developing the idea of "multi-storied residence", claiming that this is more accurate because we do not reside in any one site only.

Gough (1993) describes environmental education as a story-telling practice and narrative strategy for representing and problematising human transactions. The story-telling metaphor is useful in its implication that some aspects are selected and told while others are left out. This is the reality in any human interaction and honest research will acknowledge its similarities to a storytelling process. This contrasts with positivist research which assumes an authoritarian ability to be able to tell the whole story without acknowledging that what is left out of the story this time will change the next time it is told by different people or at another time.

I find the post-structuralist perspective and the story-telling metaphor a useful one for understanding environmental education processes: if people are telling, or 'living' a story, one would not simply insensitively intrude, tell them to stop and listen to your story, then swiftly replace their stories with your own. This is effectively what happens when educators impose theories onto communities or 'target' groups. Instead, one should listen a little to what is being said, share some of one's own experience, and work towards constructing a new and better story together.

Reflexivity and careful reflection on stories is an important part of environmental education processes. Wals & van der Leij (1997:11) claim that good environmental education "enhances a critical stance towards the world and oneself by promoting discourse, debate and reflection"; this view echoes the "dialogue, encounter, reflection" model mentioned previously in connection with exploration of water quality using test kits. Learning to listen better to

stories as well as developing improved versions are important aspects of environmental education processes. There will be as many stories, in fact more, as there are individuals, but despite this diversity it is possible to negotiate group stories. This negotiation of community stories is an essential part of environmental education processes. The Share-Net Schools Water Action Project (SWAP) water quality test kit is a good example of a resource to support this communal meaning-making: one of the activities involves talking to older people in the community and listening to their stories about the past to develop a historical picture of the water sources being investigated.

It is not enough to simply develop and tell stories though: story-telling within environmental education processes needs to be a self-conscious process. A text cannot be a neutral transmitter of reality. Metafiction requires a text to draw attention to its own structures and properties as generating meaning. This leads Gough (1993:621) to refer to environmental education as 'metafictional story-telling'. Lather (1994) insists that we read our own and other stories 'intertextually' in an effort to understand how every text is related to every other text. It would be impossible to be aware of 'every other text'; it is possible, however, to try to become aware of other texts and then to attempt to locate one's own text self-consciously within these others. The importance of contextualisation, of seeing things in context and not as isolated issues, is evident. Environmental issues differ in content and form in different localities, and diversity and contextuality are central to environmental education processes (Robottom, 1996). We also need to learn to compare stories rather than simply import them, to read stories within or against each other rather than appropriating them as our own (Gough, 1994). This will lead to a multiplying of possibilities, to more comprehensive and complex stories such as those described in research by, for example, Robottom (1996) and Hart (1996) with teachers involved in environmental education processes.

IMPORTANCE OF MISUNDERSTANDINGS IN STORIES

Usually we regard understanding as natural and normal, while misunderstanding is unnatural, abnormal and something to be avoided. Yet, as Bauman (1996:148) points out it is the misunderstanding that requires explanation and which makes us pause and think. Misunderstandings set our minds moving and

trigger the process of conscious knowledge-building: "Knowledge picks up from the point of breach, disruption, mis-understanding". Environmental education processes, especially from a socially critical perspective, involve challenging conventional wisdom and building knowledge consciously.

Change is an important element of environmental education processes. Popkewitz (cited in Lotz, 1996) claims that change can only be described as discontinuities, disruptions or breaks in practice and discourse, and that these discontinuities can often only be described after the event with a little hindsight or distance. Bauman (1996) also comments on the necessity of a certain amount of distance between an object and the viewer to enable the object to become visible. From a distance one can form a picture yet one can also see better when things are closer. There is a tension between being close enough to see well, and yet separate so as to be able to see at all. According to Bauman knowledge is the management of that distance. I recognise this tension in my own work and research: when conducting interviews about the Gold Fields course and professional development I am often aware of needing to be both fully engaged in my own and the interviewee's reflections as well as maintaining a certain amount of distance from the descriptions to be able to reflect on these.

SPACE FOR STORYTELLING

For environmental education processes to be useful they need to be enabling and enriching: they need to enable exploration with, for example, context-relevant resources that can be adapted for local conditions. Research within environmental education also needs to create space to fulfil this enabling function. As Lather (1991:163) puts it we (as researchers) need to be concerned "with creating space where those directly involved can act and speak on their own behalf." Lotz (1996:271) describes her research as "a search for creating conditions in which teachers could express their voices in dialogue with each other around the development of resource materials." Others have also encouraged teachers to tell their own stories in their professional settings (Greenall-Gough & Robottom, 1993; Hart, 1996).

Storytelling can have powerful effects. It is not only the 'doom and gloom' stories that are newsworthy and inspire action; in an article on 'success stories' in environmental education, Bardwell (1991) claims that narrative descriptions of successful efforts by ordinary people to bring about environmental change

can provide the imagery that other people need to take action. In an article entitled "When Words Speak Louder than Actions," Monroe & Kaplan (1988) describe how building familiarity with environmental issues and solutions from a variety of examples or stories can be even more productive than learning by doing, for example, through action research projects such as those described by Wals (1994).

Lotz (1996:283) concludes her research on developing environmental education materials through teacher participation with the claim that, if nothing else, the research has succeeded in "starting a conversation." Environmental education has come a long way from being solely concerned with conservation and preservation of wilderness to a broader approach and concern for 'conversation.' The two words conservation and conversation may look very similar, and while there is space within environmental education processes for both, I feel that it is conversation that more accurately describes what environmental education is all about. Conversation can be defined as "the informal exchange of ideas" (Oxford), with the implications in 'exchange' of giving and receiving as well as taking part in an exchange of positions. These definitions make 'conversation' a particularly appropriate aspect of environmental education processes. It is important, however, that this conversation is an engaged process of making meaning together rather than one of mutually reinforcing chatting! Hart (1996:35) describes conversation as a struggle and a hermeneutic cycle: "... a process of continual questioning of received wisdom that contains space for wonder, mystery, uncertainty and the barely knowable as opposed to justified belief."

If we see the environment as a kind of text, then environmental education processes are the struggles within that text. If we live in a world that is made of stories, not atoms, and if, as Baudrillard (Gough, 1994:205) puts it, "Our true environment is the universe of communication," then the art of open and engaged conversation and storytelling is going to become increasingly important within environmental education processes.

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