RESEARCH PORTFOLIO
ENVIRONMENTAL EDUCATION

KIM LE ROUX

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RESEARCH PORTFOLIO

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ENVIRONMENTAL EDUCATION in the WILDLIFE & ENVIRONMENT SOCIETY OF SOUTH AFRICA *EXTENSION SERVICES*: A situational work analysis using questionnaires and interviews and reflecting on the use of these.

March 1997

ENVIRONMENTAL EDUCATION in
the WILDLIFE & ENVIRONMENT SOCIETY OF SOUTH AFRICA
EXTENSION SERVICES

The Wildlife & Environment Society of South Africa is the country's largest non-governmental conservation organisation. It is also one of the oldest, having celebrated its 70th anniversary last year. First called the Wildlife Protection Society, it has its origins in the earliest organisations in SA concerned with the the protection of wildlife and natural areas.[1]

This early protectionist approach has since been expanded to incorporate both modern conservation of biodiversity as well as environmental education. The recent change in name from the Wildlife Society of Southern Africa to the Wildlife & Environment Society of South Africa more accurately reflects the broader concerns of the Society today.

The development of the Society reflects important trends in conservation in SA. These developing trends are evident in the changes in name of the Society and in its policies which have evolved from the 'protection of nature' to the 'wise use of of natural resources'. The recent inclusion of the word 'environment' in its name reflects a wider concern for issues that go beyond wildlife and natural resources to include social, economic and political aspects. The most recent revision of the mission statement has a strong people-centred orientation:

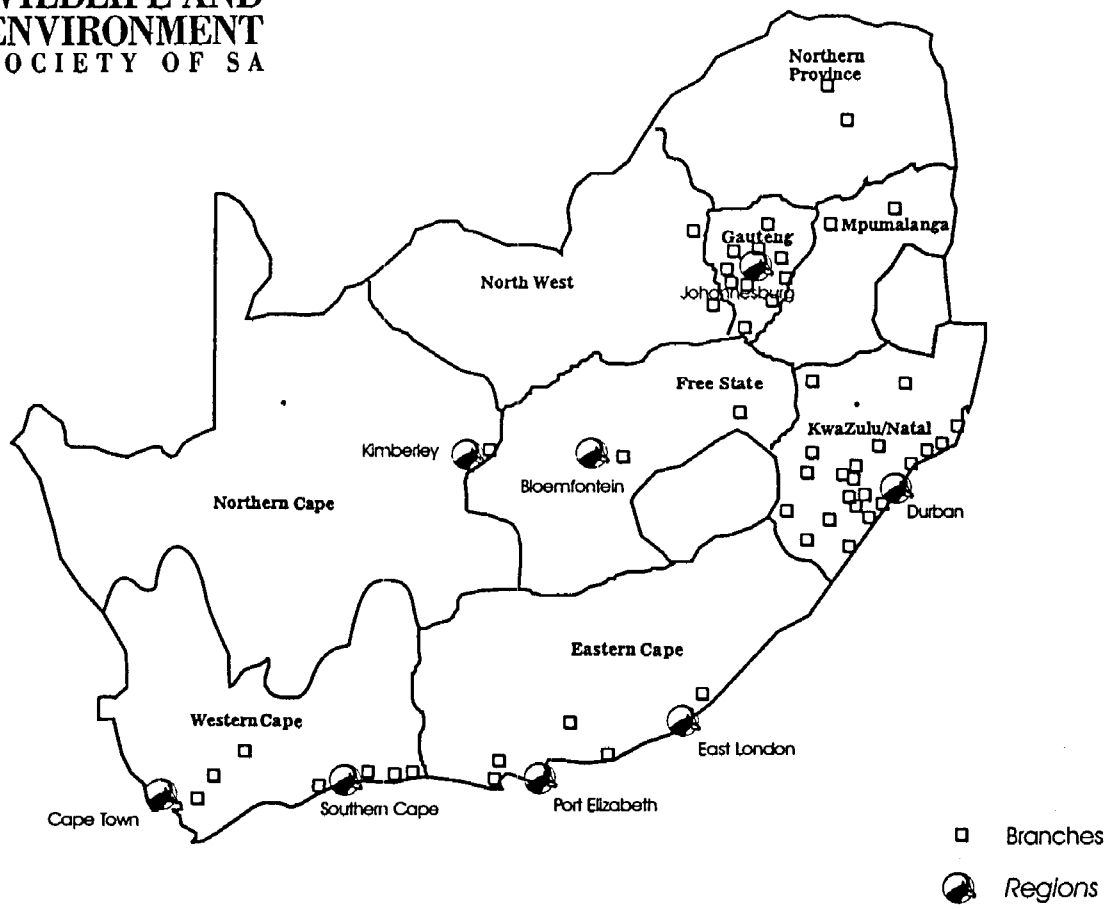
"To promote public participation in caring for the Earth"

Executive Structure of the Society

The Society has approximately 15 000 members who are affiliated to 54 branches countrywide. The branches are grouped into regions which roughly reflect the new provincial regions of SA. Each region is run by a committee of branch representatives. Regional committees elect representatives to a national council (about 30 members) who in turn elects a board. The board of the Society is responsible for the executive running of the Society at a national level.

[1] This background history of the Society and Share-Net is largely based on a PhD thesis by Jim Taylor (forthcoming with luck).

WILDLIFE AND ENVIRONMENT SOCIETY OF SA



As a non-governmental organisation with limited sources of ongoing funding, the Society is primarily dependent on its membership subscriptions to cover running costs. These costs include membership records, financial administration, the publication of magazines and the employment of staff who work in environmental education or as conservation ecologists. Other sources of income include the sale of publications, the marketing of Christmas goods by mail-order catalogue and a national fundraising competition.

In recent years membership of the Society has declined considerably from over 24 000 in 1991 to about 14 000 in 1997. Declining membership, as well as the composition of membership, is reason for concern. Members are predominantly white, English speaking, with a middle to upper income, and this does not accurately reflect the population of SA. Perhaps the recent decision to translate the name of the Society into all 11 official languages is a step in the right direction!

The Development of Environmental Education (EE) and the Extension Services of the Society

The first organised education course run by the Society dates back to 1952 . This course was run by Ian Garland for schoolboys on his farm on the North coast of KwaZulu-Natal. The course took the form of an outdoor camping experience interspersed with nature studies and the emphasis was on "fun-with-learning".

In the late 1960's and early 1970's trainee teachers in KwaZulu-Natal were taken on field excursions over weekends to learn about nature conservation. It was decided that a full-time 'field officer' should be employed to conduct field excursions which were becoming popular and to investigate the most appropriate way of involving more teachers and community leaders in environmental education. Garth Owen-Smith was appointed in 1974 and over a three-year period laid the foundation for what came to be known as the African Conservation Education (ACE) project. In 1976 Simeon Gcumisa took over the running of the project and he soon became well-known for his work with pupils, teachers and tribal authorities in the northern KwaZulu-Natal region.

Field trips were also being conducted in the KwaZulu-Natal midlands region near Howick at the Umgeni Valley Ranch, a game farm used for commercial hunting. Initially the education initiative was known as the Joint Venture, a joint project between the Wilderness Leadership School, the Natal Hunters Association and the Wildlife Society. The venue proved so popular that it was eventually purchased by the Society which became the sole organisation responsible for the education project when the Joint Venture dissolved. Once purchased, it was renamed the Umgeni Valley Nature Reserve and the education project based at the nature reserve became known as Umgeni Valley Project. Today, the Umgeni Valley Project is one of 4 Society education projects in KwaZulu-Natal, and from small beginnings (less than 300 participants in the first year), it has grown to be the largest non-governmental EE project in southern Africa, with more than 15 000 students participating in courses here each year.

One of the problems with the early field trips was that children came to the Valley, had a wonderful "bush" experience and went home - that was the end of that! Teachers desperately needed resources to continue the learning processes that had begun here back at school.

There was also a need for resources that could be used in school environments as field trips were often prohibitively expensive and difficult to organise. The nature experience needed to be extended; hence the beginning of the Wildlife Extension services in 1987 co-ordinated by Jim Taylor, intended to extend a service to those who need support in environmental education. This service took the form of providing courses and resources to both teachers and pupils.

Together with the national coordination of EE projects in the Society, the focus of the Extension Services remains on courses and resources. According to Malcolm Powell, Chief Executive Director of the Society, other roles of the Extension Services include advice on EE projects as well as direction for these projects. This function is largely fulfilled through the national planning meetings which involve all education staff and take place at the beginning of each year. The Extension Services also attempt to secure funding for the Society's EE projects on an ongoing basis. Jim Taylor who heads the Extension Services acts as a conduit between the Board and the Society's EE projects (Malcolm Powell, pers. comm.).

Environmental education has become a priority for the Society and today there are education staff in each of the regional offices countrywide.. Education officers are involved with running ecology courses for schoolchildren, developing resources, supporting environmental clubs, running teacher workshops and organising environmental education projects. A recent development is a large-scale national project sponsored by USAID. It is the task of the Extension Services (Jim Taylor, myself, Ina Waller and Nathi Makhaye at Share-Net) to support the regional projects at a national level. I am partly responsible for co-ordinating the USAID project. My job also involves preparation of display materials, editing resources, running workshops and generally responding to needs that arise at Share-Net and Umgeni Valley.

The development of Share-Net

Early EE materials produced were designed to make people environmentally aware and included booklets and posters with clear conservation messages. This was consistent with the early technicist approach of the Society and conservation organisations in general: a clear

division existed between "us" who know and "them" who need to be made aware.

Weaknesses of early resource development projects included the fact that materials had not been developed around an adequately researched rationale, few teachers were involved in the development process, the acceptance of free materials was assumed to indicate successful use of the material, and the redevelopment of material for local conditions had not been considered (Griffin, in Taylor forthcoming). Papers and workshops began to stress the importance of participation in the development process. Fortunately, personal computers and printers were becoming affordable, making desk-top publishing and redevelopment for local conditions a real possibility.

The importance of collaborative structures through which participants could develop resource materials steadily took on greater significance. At a workshop held in Johannesburg in 1990 the concept of Share-Net was developed:

> An informal, collaborative network through which individuals, projects and agencies can both contribute to, and benefit from, the development and use of environmental education resources.

At the workshop what became clear was the importance of joint action rather than manipulative attempts to change others. This was a turning point and the start of the levelling of the power gradient that had been dominated by messages from "those who know and are aware" to "those who should be made aware", and a change from presentations *to* people by experts and institutions to a focus on collaboration *between* people. A logo for Share-Net was adopted which portrays 'People, Places & Publications' interlinking in support of environmental education.

An important aspect of Share-Net is that the development and use of materials provides a tangible focus for discussion and action. This focus is often lacking in workshops and networks. Expressing environmental issues in a written or illustrated format provides people with an opportunity to clarify their thinking as they develop the material.

Finances of the Society and Share-Net

Although the Society occasionally receives large sums of money to support its work, the funding has tended to be related to a particular project and of limited duration. Covering running costs is a continuous problem which is partially alleviated by placing a realistic cover charge on services rendered, and by using funding for capital costs rather than running costs. Thus, for example, funding will not be used for salaries but for the purchase of equipment which can be used to generate further income.

All Share-Net resources are sold on a cost-recovery basis - this means that a 40 page A5 booklet is sold for about R8 which includes postage and packaging. Materials are all copyright-free and many are available on computer disc to encourage adaption and redevelopment for local use.

The USAID Project

In September 1995 the United States Agency for International Development (USAID) announced a joint financial award to the Society and two community-based organisations in Port Elizabeth. The objective of the award is to promote environmental education in historically disadvantaged areas. In the USAID project it is the Society is responsible for

- running teacher workshops
- developing and disseminating resources (with participation from users wherever appropriate),
- providing appropriate field courses and excursions for teachers, pupils and community leaders,
- providing courses in environmental education for adults, including community workers and teachers,
- providing support for schools or community groups that wish to develop food gardens or appropriate muthi-plant or indigenous plant propagation suitable for urban and peri-urban agriculture, and
- promoting and fostering environmental youth clubs in urban and peri-urban areas. (page 6-2 from Attachment 2. Agreement No. 674-0312-A-00-5052-00 between USAID and Wildlife Society, September 28th 1995).

The substantial funding for this two-year project has been largely divided amongst the various branches of the Society countrywide. This was in keeping with the project objectives as stated in the US-AID contract: *"The Wildlife Society will endeavour to implement the programs in other major metropolitan areas using its existing branches, staff, and national infrastructure"* (page 5-2). Each project that makes use of the funding must:

1. be of an environmental education nature,
2. be for disadvantaged communities, and
3. be for people from urban or peri-urban areas.

This is the first time that USAID has invested in a project of an environmental education nature in South Africa. It is also the first time that the Society has had to manage an internationally funded cooperative initiative of this magnitude. As such it has been a learning experience for all involved!

The annual National Planning Meetings of the Society are held in January and education staff use this time to share problems and ideas, evaluate past projects and plan for future ones. These meetings have been ideal opportunities for USAID project planning and Russell Hawkins who cordinates the project from USAID has attended parts of these meetings. The personal commitment of project leaders from both USAID and the Society has certainly contributed to the project's success. The project will be completed in September of this year but there is a possibility that funding may be extended.

USAID requires project reports every 6 months. This involves co-ordination of the regional reports, evaluation of projects and updating of budgets. Reporting techniques have been jointly developed by project executants and with suggestions from evaluators, this has led to a very effective and smooth reporting process. The reporting techniques seem to provide a useful structure for running the projects and discipline for continuous evaluation and improvement.

Research of Extension Services support

Having to do research for this assignment provided an ideal opportunity for an assessment of

the kind of support the Extension Services of the Society attempts to provide. I am involved with coordination of the USAID project and as this also forms a considerable part of the work of the education officers in the various regions, I decided to focus on this in the questionnaire. We also wanted to find out what aspects of support from the Extension Service people found useful and hear any suggestions for improvement.

Survey Record Sheet

As a start to our EE Support Survey Jim and I felt it would be a good idea to capitalise on any phonecalls that took place. We decided to mention the idea of the survey to any of the education officers to whom we happened to speak. We therefore raised the following questions "What do you find useful?" and "What can we improve?" as well as mentioning that a questionnaire would be following soon. In order to keep track of these discussions and not to duplicate our efforts we developed a "record sheet" for keeping near to the telephone. The record sheet consisted of a table with the names of the education officers, branch chairpeople and managers grouped according to region. There were blank columns for filling in the date and responses to the 2 questions mentioned above. (See Appendix A for copy of record sheet)

Developing the questionnaire

I developed a list of questions I thought would be useful and discussed this with Jim and Rob O'Donoghue. Rob warned against questions that were too vague and broad to be useful; I was wary about channelling responses with questions that were too specific. Rob also pointed out that questions about the positive and negative aspects of a project sometimes created a false dichotomy and somehow left out much of the middle; one can artificially draw out the black or white from something that is actually grey. It was interesting to note that sometimes the same "positive" aspect was reflected from a slightly different angle as "negative", eg. the benefits of rigorous reporting procedures for the USAID project were also criticised for demanding too much administration.

Although time constraints did not allow adequate pilot-testing of the questionnaire, I did fax it to one of the recipients-to-be for comments. I adapted some of her comments into

SHORT REPORT ON QUESTIONNAIRE FEEDBACK

Positive aspects of USAID project

- nearly everyone commented on the value of a disciplined and rigorous reporting system that is coordinated nationally,
- it is good to be able to use funding to spread the activities of the Society to extend to those who cannot afford to pay for services,
- regions seem to benefit from being part of a national whole; working as a team rather than in isolation,
- sharing of the completed report gives access to others' experiences and ideas,
- fits in well with the work we do anyway,
- good publicity for the Society,
- provides education staff with resources like *Toktokkie* magazine,
- improves the equipment and resources we have so that we can work better to support others,
- allows for useful partnerships to develop.

Negative aspects of USAID project

- demands on time,
- the specific focus on "disadvantaged urban communities" is sometimes difficult,
- having to "pay now, claim later" is sometimes problematic,
- sometimes difficult to spend all the money,
- perhaps there should be more "fun" activities like visits to game parks.

Extension Services support that is helpful

- everyone mentioned the value of Share-Net resources,
- being kept informed of latest developments by Ina's quarterly letters,
- national coordination of projects like USAID,
- handling of funding,
- encouragement,
- friendly, prompt responses to requests.

Ideas for better support

- more contact between regions to share ideas and work together,
- visit regions,
- more EE officers,
- support for more Environmental Educators courses.

Opportunities in EE in SA to pursue

- Outcomes Based Education, EECI
- Environmental Clubs
- marketing Share-Net booklets commercially,
- a forum with political decision-makers to inform of Society activities,
- Environmental Educator courses throughout SA,
- resource development.

I also compiled an action list in order to make full use of our research. A detailed list of points to be followed up combined suggestions from the participants as well as comments from Jim and my own ideas. This will become a check list to ensure that we do not miss any opportunities for improving our work. (See Appendix D)

Interviews

I conducted two kinds of interviews: the first was a quick clarification of specific points in the questionnaire, the second, a more formal and structured interview.

1) Quick clarifying interviews

Certain meanings were unclear in the written responses of the questionnaires. I made a quick phonecall to those respondents to whom this applied in order to clarify these. Thus, for example, one respondent compared two projects very briefly in her questionnaire and over the phone I was able to understand more fully her reasons for doing so. She also stressed some of her points and seemed to be more comfortable doing so verbally than in writing. In another follow-up phonecall with one respondent who had raised a problematic issue, we were able to come to a more concrete plan of action; the questionnaire assisted in raising the issue while the interview was needed to develop the idea further.

2) Structured interviews

I conducted two more formal structured face-to-face interviews of about 15 minutes each. Once again the questionnaire provided a focus for the interview and I prepared a number of other questions in addition. In the first interview I once again was able to clarify an unclear point. I also wanted to share some of the ideas from the other questionnaires with this person as he was in a position to comment on the viability of the suggestions. The interview was also a good opportunity for this person to expand on something from the questionnaire that I hadn't raised. I asked him about the actual experience of filling in the questionnaire and he said he valued the opportunity to record more formally some of his experiences and concerns. He felt that his opinions were being taken more seriously than perhaps they might be if they were aired during "idle teatime chatter". (I don't agree entirely with this as many an idea is developed over an informal cup of tea, though I do feel that a disciplined airing of questions is

valuable).

In the second interview I was struck by the amount of material that could be covered in relative depth in a short space of time spent in dialogue. The interview seemed to be a very efficient method of hearing opinions and gathering facts. Interviews are far more capable of penetrating the surface than questionnaires.

Concluding Thoughts

I have found that together the questionnaire and interview can be useful tools for investigating issues. Though limited in its capability, the questionnaire is ideal for "airing questions". Answers that are vague or unclear can be clarified by short telephonic interviews. Questionnaires provide useful opportunities for both researcher and respondents to clarify their thinking in order to respond in writing. In this particular study, the questionnaire was regarded by some respondents as a sign that their views were valuable and would be taken seriously.

Interviews are more directly influenced by the nature of the interviewer than are questionnaires. Because both parties are present issues can be raised and clarified in interviews. The interview also provides an opportunity for ideas to be developed through dialogue. The potential depth and richness of responses merit the fair amount of preparation that may be necessary for setting up an interview.

Questionnaires and interviews may not be able to penetrate to any great depth but both can be useful reflective tools for loosening the soil in which our ideas and beliefs are often firmly embedded.

LIST OF REFERENCES

Taylor, J (1997) *Share-Net: A Case Study of Environmental Education Resource Material Development in a Risk Society* Forthcoming PhD thesis, Rhodes University, Grahamstown.

APPENDICES

A. EE Survey Record Sheet

B. Blank Questionnaire

C. An example of a covering letter sent out with questionnaires

D. Pos-Questionnaire Action List

SURVEY ON EE SUPPORT - MARCH 1996

Interview Record Sheet

Name	Date	What do you find useful?	What can we improve?
Border - Ed. Officer Avril Wilkinson			
Border - Branch & EE Chair Kevin Cole			
EP - Ed. Officer Nicky Schoemann	7/3/97 Kim	Mailed questionnaire to Nicky	
Val Hunt Manager PE Branch			
EP-Chair EE Centre Sue Spies will interview to clarify comparison.	3/3/97 Jim	Appreciate moral support and ongoing encouragement. They feel they work alone and value the intensity/ support they get. The especially value: Share. Not Resources and the experience (track records of effort) we share.	Would appreciate more visits/time together. Would like to encourage more regional staff interaction e.g. PE + East London.
Western Cape - Ed. Officer Alison Kelly	6/3 Kim	Mentioned questionnaire + faxed 1st draft for comments + suggestions.	
Western Cape - Chairperson Graham Avery			
Western Cape Manager Andy Gubb			
Northern Areas - Ed. Officer Lynn McEwan away till ± 20 March			
N. Areas Manager Karen Shepherd	11/3 Kim	called to question relevance of questionnaire to herself + wondered whether to pass to Lynn - explained wanted [illegible] opinion	
N. Areas Chair Bruce Davidson			

Free State Leon B.	4/3/97 Jim	Shar-Net materials update appreciated. Finds resources useful.	Need help to appoint a full-time W.L.S EE officer. Society is back-bone of EE in SA. Need qualified person. Need booklet on all available resources on EE in SA.
Free State Bernice Cossavello			
Southern Cape Godfrey Bass			
Southern Cape *Branch Chair* Lorna Watt			
KZN Ed. Officer Tim Wright			
KZN Branch Chair Charles Botha			
Northern Cape Ed *Volunteer* Suzanne Erasmus			
Mark Anderson			
Northern Cape *Branch Chair* John Sulter			
Toktokkie Roberta Griffiths	17/3 Kim	Follow-up. Thanks. Said we would [illegible] Potential [illegible]	[illegible]

APPENDIX B

WILDLIFE AND ENVIRONMENT SOCIETY OF SA

QUESTIONNAIRE ON EXTENSION SERVICES SUPPORT FOR REGIONAL PROJECTS

Name .....

Region .....

Position .....

How long have you worked for the Society? .....

Briefly describe 3 focal areas in the work that you do:

1) .....

.....

2) .....

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3) .....

.....

The USAID project is a large national and relatively new project for the Wildlife & Environment Society. How does it affect your current work?

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.....

.....

Please list 3 positive aspects of the USAID project

1) .....

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2) .....

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3) .....

.....

Other .....

Please list 3 problem areas of the project

1) .....

.....

2) .....

.....

3) .....

.....

Other .....

If you are involved with any projects besides the USAID one you may like to compare the two.

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For a number of years now the Extension Services (Jim, Kim, Ina, Nathi, Share-Net) have tried to support EE projects at a regional level. What aspects of this support have you found helpful?

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Do you have any ideas how we could better support/ work with you?

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In South Africa at present there are many opportunities for Environmental Education, eg. training, funding, resource development. List any that you feel we should pursue.

.....

.....

.....

.....

Please feel free to add your own page with any other thoughts or ideas.
Thanks so much!!

WILDLIFE AND ENVIRONMENT SOCIETY OF SA
People caring for the Earth

P O Box 394
Howick
3290
Fax: (0332) 304 576
Tel: (0332) 303 931

FAX MESSAGE

TO: Valerie Hunt (041) 56 3228

FROM: Kim le Roux

No. of pages (including this one): 3

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10 March 1997

Dear Val,

I know that Jim has mentioned the idea of a survey for the regions to you. I haven't ever met you except over the phone, Val, and you may not know that I have recently started an EE course at Rhodes. As part of the course I have to do an assignment on my work situation. Jim and I are also very keen to find out how you feel about the support that the Extension Services of the Society (Jim, myself, Ina, Nathi, Share-Net) provides (or tries to provide). What works (or doesn't work!) for you? How could we better support you in your work? Please fill in the 2-page questionnaire that follows to assist us. Don't feel limited to the questionnaire though - feel free to write your own thoughts or call Jim or me if you'd prefer to chat over the phone.

Looking forward to your responses. If at all possible please fax back by Wednesday. Thanks so much. We hope this leads to an even better working relationship.

Kind regards,

Kim

Kim le Roux

APPENDIX D

POST-QUESTIONNAIRE ACTION

SPECIFIC ACTION

- Write short report which can be sent as follow-up to respondents. Use also in USAID report.
- "Get regions together more often" - perhaps we could make use of EEASA '97 workshop: encourage education officers to come (use USAID funds), organise a specific Wildlife Society session to focus on progress of USAID, ABSA projects.
- Tell Ina how well appreciated her quarterly keeping-up-to-date letters are.
- Meet with Ina, Nathi, Kim, Jim to discuss survey results.
- Send info to Bernice Cossavello (Free State) and add her to Ina's list for quarterly letter.
- EECI action. Is Jim's input necessary? Suzanne Erasmus concerned.
- ESKOM Enviro Competition - perhaps a letter to all regions from Jim (and/or Lynne) informing of latest developments. (Contact Suzanne E especially).
- Visit the Northern Cape (Suzanne - Kimberley). I'd love to! Do they need a full-time education officer? This is probably for region chair to decide with Jim and Suzanne.
- Find out from Linda whether anyone in N.Cape is doing GF course.
- "a forum with political decision-makers to inform them of Society activities" ??
- Nicky Schoeman - feeling isolated. Can we help? Phone - Kim/Jim?
- Leon Barkhuizen would like full-time EE officer for Free State. Investigate.
- Must have a Share-Net workshop at EEASA '97 - Nathi/Jim (Kim). Tell Leon B.
- Toktokkie - perhaps assign particular people to report on projects for next 6 issues. Warn them now - take photos. Jim/Kim assign, Roberta to follow up. (This will be good for USAID and ABSA publicity for reports.)
- Valerie Hunt's idea about more fun outings to create enthusiasm.
- Enviro clubs to become specifically part of Extension Services (Tim).

Interviews

- Interview Malcolm and perhaps give adapted questionnaire.
- Interview Tim - expand on questionnaire and discuss more Enviro Educators courses in other regions (is there a need, where, who to organise, funding), and Life Skills/Leadership courses (what does he think?).
- Interview Nicky Schoeman.
- Interview Sue Spies - clarify PE Schools and USAID projects comparison.

EE OPPORTUNITIES TO INVESTIGATE

- Environmental Educator courses in areas other than KZN. Speak to Tim. SHELL funding? Or USAID?
- Lifeskills/Leadership training courses. Speak to Alison Kelly, Tim, Nicky & Sue. Perhaps one course to train the trainers who could then run courses in their regions. An option for a national USAID project if funding continues?
- Teacher training within OBE.
- Commercial marketing of Share-Net booklets. Article for EEASA Bulletin.

2. ANALYSIS OF RESEARCH PAPER

Analysis of "Resource Materials Development in Environmental Education: Exploring some of the Myths and Tensions in Participatory Resource Development in the *We Care* Primary Project" by Heila Lotz (1995) *Southern African Journal of Environmental Education*

April 1997

Kim le Roux
April 1997

ANALYSING EDUCATIONAL RESEARCH TRADITIONS

Analysis of "Resource Materials Development in Environmental Education: Exploring some of the Myths and Tensions in Participatory Resource Development in the *We Care* Primary Project" by Heila Lotz, 1995, Southern African Journal of Environmental Education, 78-89

Lotz describes the initial aims of her project as addressing the need for environmental education (EE) resource materials for the junior primary phase. She intended to use an action research orientation "to guide a process of participant-centred materials development" (78) and she saw her role as a facilitator of teachers.

In her substantial background to the research project, Lotz discusses shifts in EE and stresses the context of social change and EE's role in this change. She also mentions the South African educational crisis of the time and notes the effect of this on teacher disempowerment. Lotz writes of the "moves towards participatory-oriented approaches to transformation" (80) and locates her own research project firmly within these moves. From the start, this research seems to be positioned within a critical research tradition and the researcher sets out to use an action research method.

Action research has been variously defined: "The study of a social situation with a view to improving quality of action within it" (Elliot in Ebbutt, 156) and "Action research is trying out an idea in practice with a view to improving or changing something, trying to have a real effect on the situation" (Kemmis in Ebbutt, 157). Lotz's resource development process is divided into two distinct phases separated by the researcher's critical reflection on phase one which largely shapes the second phase. Thus the above definitions are apt for the first part of Lotz's research though she does emphasize that she will reflect on the research processes. This reflection results in a very different approach to the second phase, making the definition of action research which follows, a more appropriate one: " the process of action research (comprises) a series of successive cycles, each incorporating the possibility for feedback of information within and between cycles" (Ebbutt, 164).

Though it is easy to assume that an action research project automatically falls within a critical research paradigm, it soon becomes clear that this is not the case in all of Lotz's study (she acknowledges this and modifies her second phase accordingly). McTaggert identifies three different kinds of action research: technical, practical and emancipatory. In technical action research, the researcher acts as a facilitator in what can involve "co-option of teachers to work on externally formulated questions and issues which were not based in practical concerns of practitioners" (Kemmis & Carr in McTaggart, 27).

There are elements of the "technical action research" approach in the first phase of Lotz's study. Teachers were withdrawn from their classrooms and schools to teacher centres for workshops in which the researcher found herself attempting to "convince" (81) teachers of the merits of the *We Care* materials. A type of quasi-experimental situation emerged with a "limited amount of participation *solicited* to provide validity to the participatory claims of the project" (82, my emphasis). There are clear elements of the positivist research tradition in this first phase where the desired outcome is known by the researcher from the start and the research process merely realises and validates this outcome. Lotz acknowledges that this phase "retained many of the rationalist and technicist assumptions which characterise the RDDA model" (82) and which the research had intended to challenge.

Data collection for phase one of the project involved the compilation of a research diary, focus group interviews, workshop contribution and documentation. These techniques assisted and even justified the process of "pseudo-participation" that was taking place.

In a discussion on research as praxis, Lather describes the irony of "bad" research that dominates in its attempt to set free, research in which the researcher acts as "interpreter of the world" and "exposer of false consciousness" (59). Respondents become "objects" or "targets of research", terms which smack of positivist experimental research. These are elements that can be recognised in Lotz's first phase, a situation in which "in the name of emancipation, (the) researcher impose(s) meaning on situations rather than constructing meaning through negotiation with research particiapants" (Lather, 59).

In her critical reflection of the first phase, Lotz notes how she saw herself as separate from the the participants: "the participants were participating, whilst I, the researcher, was engaged in cycles of critically reflecting on the research action" (83). There is a distinct "us" and "them" separation which reminds one of the division that positivist researchers aim to achieve when distancing themselves from their subjects.

Reflexivity which involves "critical self-reflection both of the researcher him/herself and the effect that s/he has on the research process" (84) provided a useful conceptual tool for Lotz to gain clarity after phase one. Janse van Rensburg claims that reflexive realizations come from doing for "in doing comes clarity" (6) and this is clearly evident in Lotz's approach to her reflections on the first phase of her research; the lessons she has learnt from "doing" phase one profoundly influence phase two. Lotz acknowledges the technicist approaches to the action research in phase one which were revealed when reviewing the research design.

A shift in the research orientation resulted in a change in the action research of phase two, relocating the research within a critical research paradigm. The relationship between the researcher and teachers was "reconceptualised as partnerships of people involved in the critical co-construction of materials around common issues" (85). Phase two involved a revised orientation to participation in the resource materials development process, the focus being to find ways for "authentic participation" (86) to take place.

Instead of workshops being held 'outside' of schools at teacher centres, they now took place at the schools themselves. Workshops in phase two had more of an exploratory focus than the previous informative focus. Participation changed from being somewhat phony or "pseudo" to being more authentic. More emphasis was placed on the sociological and historical influences on the project. The researcher took careful cognisance of the context of the teachers and worked with individual schools and groups of teachers at their schools. All these aspects of phase two place the project into a more authentic participatory process of action research within the tradition of critical theory.

In phase two materials were developed in draft form, then shared and redeveloped through

interaction with teachers from other schools. The resources changed as the participants changed leading to the realisation for the researcher that "all knowledge is partial" (87). Here a clear consructivist orientation to knowledge is evident. This view obviously affects the production of appropriate resource materials responsible for assisting learners with gaining knowledge. Materials were thus developed around a range of *local* issues so that learners would be able to construct meaning for themselves in their local contexts. Also, a constructivist view of knowledge necessarily supports the notion that resources must change as participants change.

The two phases of this research paper make it an interesting one to analyse. The critical reflections by the researcher herself during the research process clearly make this "reflexive research" as defined by Janse van Rensburg as "the investigation of social and educational theories, including one's own, as shaping influences" (6). The paper is also a good illustration of how reflexive research is a process of getting to know what we are doing better. As TS Elliot puts it

> We shall not cease from exploration
> And the end of all our exploring
> will be to arrive where we started
> And know the place for the first time
>
> *Little Gidding,* quoted in Ebbutt, 152

What Elliot leaves out is that through this knowledge of "the place for the first time", the action researcher attempts to do things better the next time. In some cases, as with Lotz in the *We Care* research project, this next time is more successful than the first.

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3. RESEARCH REPORT

The role of the Gold Fields Participatory Course in Environmental Education in Professional Development of environmental educators in southern Africa.

December 1998

THE ROLE OF THE GOLD FIELDS PARTICIPATORY COURSE IN ENVIRONMENTAL EDUCATION IN PROFESSIONAL DEVELOPMENT OF ENVIRONMENTAL EDUCATORS IN SOUTHERN AFRICA

KIM LE ROUX

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THE ROLE OF THE GOLD FIELDS COURSE IN PROFESSIONAL DEVELOPMENT OF ENVIRONMENTAL EDUCATORS IN SOUTHERN AFRICA

Receiving the course certificate: professional development culminating in a qualification

"Feeling bold"

Working together on group assignments

Developing and working with resource materials

Course cameraderie: learning through growing together

INTRODUCTION

The Gold Fields Participatory course in Environmental Education was developed as a part-time course that focused primarily on the educational thinking within our work in environmental education. The idea was for participants to develop as active practitioners with a reflective orientation (Paxton & Janse van Rensburg, Course Orientation Notes, 1997). The course runs over a year, the intention being to give practitioners time to thoroughly reflect on their work and the educational ideas influencing that work. This focus in the course content and orientation on the work that participants do, and the emphasis on improving the way in which we work, is embedded within what several course participants have started referring to as "professional development".

The orientation of the Gold Fields course encourages professional development of participants through continuous critical reflection. Ongoing evaluation throughout the course is an integral part of every Gold Fields course. This more "formal" evaluation project, itself a form of critical reflection, will assess and report on the broad role of the Gold Fields course in professional development in environmental education in order to give the course coordinators, the sponsors and the accrediting institution an insight into their investments. It is also hoped that the evaluation will contribute to meaningful improvements to the course.

During the ongoing review of this course over the years, the theme of professional development has been mentioned increasingly as a significant course outcome. According to a range of participants' comments, the Gold Fields course has contributed in many ways to the professional development of people working in environmental education. This part of a broader Gold Fields course evaluation (Janse van Rensburg & Le Roux, 1998, referred to later as 'main evaluation report') explores different aspects of professional development as they emerged and were clarified in an attempt to elucidate the ways in which the course has contributed to environmental education in southern Africa through professional development of environmental educators. Other parts of the broader report analyse the course materials and the development of the course, and investigate issues of assessment and accreditation, as well as the nature of participation in this participatory course.

REFLECTIONS ON THE RESEARCH PROCESS AND METHODOLOGY

The research for this report has as its aim to evaluate, describe and comment on the role of the Gold Fields course in professional development in environmental education. To this end, the research methodology was critical ethnography (Lincoln & Guba, 1985; Thomas, 1993). Ethnographic research involves field research and interpretation of results in the **context** of the data collection and attempts to generate data from the perspective of the individuals being studied (Wiersma, 1986). This research is *critically* ethnographic (Thomas, 1993) in its intention to challenge and disrupt, where necessary, current understandings of/in the course and to enhance changes in environmental education through improvement and development of the course.

"Illuminative evaluation" (Parlett & Hamilton, 1976) is a form of critical ethnography which involves the intensive study of an educational programme (especially small-scale) and is concerned with descriptive interpretation. The aim is to illuminate problems, issues and features; the evaluator's task is "to sharpen discussion, disentangle complexities...raise the level of sophistication of debate" (99). This report aims to be an illuminative evaluation.

A range of techniques for collecting data has been used:

- both participant and non-participant observation (Cohen & Manion, 1989) of course activities (workshops and tutorials);
- photographic recording of participants' professional activities in their work settings and participants at workshops and tutorials;
- discourse analysis (Bennett, 1996; Fairclough, 1992) has contributed to an ideological critique of course materials (in particular, the course orientation) and of what participants have said in interviews, workshops, focus groups and written course evaluation feedback;
- questionnaires (Cohen & Manion, 1989) and written feedback from a sample of present and past participants;
- face-to-face and telephonic semi-structured interviews as well as focus groups (Frey & Fontana, 1994) with a sample of present and past participants. Course coordinators, tutors and students have been interviewed about their views on the contribution of their Gold Fields course experience to their own professional development and to the field of environmental education in southern Africa in general. Some of these interviews have been developed into case vignettes which can be found in Part III of the broader evaluation report.

The use of more than one method of data collection, or "triangulation", is important for understanding more fully the richness and complexity of human behaviour (Cohen & Manion, 1989). Multiple data sources should be compared to check for corroboration, or "qualitative cross-validation" (Wiersma, 1986). The process of triangulation has therefore been employed in this research project to improve the trustworthiness of the conclusions.

For data collection I made use of opportunities that arose for meeting and talking to course participants such as the national workshops for the 1997 course, and regional tutorials held in KwaZulu-Natal (where I live). These were ideal opportunities for focus group discussions - I held four such discussion groups of between 3 and 10 participants. I gave evaluative questionnaires to all 50 participants of the 1997 course all of which were completed because the course evaluation was built into a workshop session. Evaluation is an integral part of the Gold Fields course and an opportunity for professional development in itself so these "formal evaluation" activities formed a useful part of the course.

I also organised a reunion for the 11 KwaZulu-Natal participants from the previous year's course at Umgeni Valley Project (where I work). Though only five were able to attend, nine returned the questionnaires I had sent out with the invitation.

I interviewed individual participants both when unexpected opportunities arose (for example, when past participants of the course visited Umgeni Valley Project for resources or courses, and at Rhodes because some of my fellow Masters students had also been Gold Fields course participants) and in specially arranged meetings. I conducted individual interviews with five course participants in order to write up short case vignettes of their experiences. The vignettes are part of the broader course evaluation report though aspects from the interviews relating to professional development have been included in this part of the report too.

At the end of each Gold Fields course participants fill in fairly comprehensive evaluation forms - these forms (over 100 from the 1996 and 1997 courses) were also valuable sources of information when carefully analysed.

These general comments about the research methodology are now followed by a more personal and detailed account of some of my experiences during the research process. Reflective comments on my experience of the methodology of data collection and descriptions of how the data was collected are intended to contribute to contextualising the research. This is also an attempt to write myself into the text. In the bulk of this report I have tried to let the data speak for itself (hence the large number of quotations from course participants) but in the brief comments that follow I aim to acknowledge my involvement in that articulation.

In the main part of this report the side of the page will be used to highlight key points and for clarification of certain concepts.

JOURNEY OF A NERVOUS NOVICE RESEARCHER

I started working for the Wildlife & Environment Society of South Africa (WESSA) in 1995 and have ever since been very involved with the Share-Net project (of which WESSA is a partner) producing low-cost resource materials for environmental education. WESSA has always both actively contributed to and benefited from a close association with the Gold Fields course: many WESSA staff have participated in the course over the years as students and tutors and one of the course national workshops always takes place at WESSA's Umgeni Valley Project, home of Share-Net.

During 1995 I attended some of the workshops held for the Gold Fields course which had been adapted for staff of the Natal Parks Board (NPB - now KwaZulu/Natal Nature Conservation Services). I also worked with Linda Paxton as she reworked some of the Gold Fields course materials. By 1996 I was determined to be a participant on the course and as my colleague, Jim Taylor was tutoring, and it was my job to assist him, I also became an assistant-tutor, helping largely with the logistics of the regional KwaZulu-Natal tutorials and gathering in assignments, etc.

As will be seen in the report which follows, a number of my examples come from the 1996 Gold Fields course and in particular the KwaZulu-Natal region. Much of my interest in the course developed during the personal experience of being a participant in 1996. It was also during this course that I first became interested in working on an evaluation of the course with Eureta Janse van Rensburg. At the second national workshop held at Cape Point in July 1996 Eureta first brought up the idea of a formal evaluation of the course. During one of the workshop sessions the whole group began to explore the idea and started to think of various themes such as professional development and ways in which the evaluation could proceed: *Who, What, Why, When* and *How* were brainstormed and discussed.

I was curious about what it is that made the Gold Fields course such a unique and worthwhile experience both to myself and the countless other participants to whom I spoke. I admit from the start a very positive bias in favour of the course!

In 1997 I registered for a part-time Masters course in Environmental Education at Rhodes University. This decision was certainly partly as a result of my experience of the Gold Fields course and a means of taking my own professional development a step further. I undertook to be a research assistant to Eureta (who runs the Masters course) for the formal evaluation of the Gold Fields course as a whole and decided to focus on professional development through the course for one of my Masters research projects.

And so this is how the research began... What follows are some of the trials, tribulations, experiences and lessons I have learned during the research process. The notes come from a research journal in which I tried to clarify and contextualise data as I collected it. I hope the comments help to contextualise what is written later and that they inspire others who may feel as intimidated as I did when I first started!

I am indebted to Rob O'Donoghue in particular for many of the insights described below and am very grateful to him for his unwavering support, enthusiasm, for helping me to laugh at myself often through tears of paralysis, for encouraging me to grapple, for muddying things when they were clear and clearing them when they were muddy! I also gratefully acknowledge support from Jim Taylor who was simply always there for me.

EARLY ANXIETIES: THE NEED FOR DISCOVERY AND "LIVING FORWARDS"

I remember feeling very anxious before my first focus group discussions with course participants at their second national workshop in July 1997. From my research notes: "I am finding this research experience quite daunting... a bit like walking with only the next few centimetres of the path in view. I keep feeling like I want to see the whole path ahead of me clearly and thinking that there is somehow a right and a wrong way of doing this. I suppose then I would be dragging the research along, rather than letting it unfold, in the company of others ... discovering together rather than uncovering what I want to find/know. I have a strange sense of living forwards, rather than planning it all in advance and then living the plan backwards!!" (5 July 1997, Pretoria). I remember thinking about the process of research as DISCOVERING vs UNCOVERING, and that it should be more of the former with its implications of being open to the unexpected, than the latter, with its connotations of intent to find what one sets out to find.

I experienced this lack of confidence often in the early stages of this research (and frequently later too!). I learned that however much one reads or is told about research, it is only by actually *doing* that one develops confidence.

TALKING HELPS!

Personal communications with people like Rob O'Donoghue, Jim Taylor, Eureta Janse van Rensburg, Heila Lotz, and fellow Masters students like Lynette Masuku and Paula Morrison, as well as colleagues, have been vital to this research process. Clarification and/or muddying of what I thought was clear (if something is muddy it needs to be clarified, and if it's clear it usually will benefit from some muddying!) can only come through talking with others. As someone who likes to feel certain and clear before I speak or write this has been particularly difficult for me! But the emerging clarity that comes from talking about concepts like praxis was certainly not something I could have developed on my own.

MAKING USE OF (AND OPTIMISING) OPPORTUNITIES

Opportunities for research frequently arise and with some thoughtful planning these opportunities can be optimised. The following example describes how I was able to make the most of input from participants at a national course workshop.

Heila Lotz, 1997 course co-ordinator, had decided to introduce the idea of evaluation in one of the sessions at the second national workshop. This was an ideal opportunity for me to do something practical with the group on evaluation. It seemed a useful time to be looking at this idea in terms of professional development of participants on the course: they were now mid-way through the course at the second of the three national workshops, having done a pre-course assignment (introducing themselves and their work context), the first assignment (exploration of a pertinent environmental issue) and the second assignment (discussion of an environmental project in which the participant is involved which addresses the environmental issue of the first assignment).

HELP - IT'S HAZY!

In the workshop session described above it was important to clarify what we would be evaluating - professional development can be quite a hazy concept. So we (Heila, Rob O'Donoghue and I) worked on three questions which I handed out to each participant. The first question (Has the course helped you to understand and explain your work better?) was for discussion in groups of eight. Tutors gave me a written summary of the feedback. The second question (If you can, give an example of where you have felt professional growth) was to be answered individually and written down. The group discussion opened up some of the issues and allowed ideas to begin to develop and uncertainties to be aired. The second question "forced" participants to think of a particular personal example and clarify it by writing it down. The intention was to move from the general (opened up in group discussion) to the particular (own example of experience). The design was intended to encourage participation from everyone: in the group people could begin to explore the issue; those that were not comfortable voicing their experiences could then write them down on the form which was optionally anonymous. I was glad most people did write down their names as I was then able to further explore some of the issues raised in the questionnaire in later focus groups.

I think that having to write something down forces one to focus, dig deep and contribute - it can be easy in a group to sit back and let the more confident ones do all the work. Some of the participants of my particular group were struggling to write anything. Rob's advice to them was to stay with the struggle and to write something even if it were only a comment on why they were finding it difficult to respond. This was a good example of me mistaking my own lack of confidence and insecurities with the haziness of the participants themselves: I thought I had to be clearer about what they had to do when it was they who needed to clarify for themselves how the course was affecting them.

TIME PAINTS A DIFFERENT HUE

The effect of time on our understanding of our experiences is an interesting dimension to explore. Present and past participants are likely to reflect different course experiences and it was useful to explore both perspectives. As Rob O'Donoghue put it in an interview about the history and development of the Gold

Fields course "in the time you are not as conscious of the processes that you are involved in" and "time paints a different hue" (4 July 1997, Pretoria). Current participants of a course may not be able to see certain aspects and understanding may only develop with hindsight. This point is reflected in Mike Ward's (past student, current tutor) comment: "it's very broad the whole idea of professional development...often difficult to pin it down until you are in a situation and you say 'Phew, I'm glad I had those experiences on the course'". The course evaluation interviews provided an opportunity for reflection indicated by comments such as "...now that I think about it..." (Paula Morrision).

USING QUESTIONNAIRES

Questionnaires can be useful tools for focusing thoughts as described above. I frequently used a brief questionnaire in combination with a focus group or interview. I was never sure whether it was better to ask someone to fill in the questionnaire before or after I talked to them. If the questionnaire was filled in first and I had time to read it before interviewing, I was able to follow up on issues raised therein and to ask the person to verbally clarify or expand on particular aspects. Interviews or focus group discussions can be opportunities to begin to explore and "loosen up" issues. Questionnaires can take the process a step further. If we talked first this was useful for opening up issues which could be clarified when the questionnaire was filled in later. Either way I found questionnaires a useful tool and most especially when used in conjunction with an interview or discussion.

The following note from my research journal (September 1997, Howick) describes a particular example of using questionnaires:
"I sent out questionnaires to the 1996 KwaZulu-Natal group of whom I had been part. It was about eight months after we had finished the course and I organised a reunion (picnic at Umgeni Valley). With the letter inviting people to the reunion I enclosed two short questionnaires. I think that questionnaires of longer than one or two pages have very little chance of ever being filled in! I did always invite people to add any further comments they may have wished to make on a separate page so as not to restrict responses. One of the two questionnaires was for a boss or colleague to fill in with the explanation in the accompanying letter that "sometimes it is the people with whom we work who notice changes in us". The questionnaires were a useful way of beginning to focus people's thoughts back on the course which had been completed a number of months before. For me the get-together was an opportunity to further explore issues that had been opened up in the questionnaires."

TRIANGULATION

In order to improve the trustworthiness of conclusions it is important to use more than one method of data collection, or "triangulation" (Cohen & Manion, 1989). As described above I found questionnaires useful for complementing other techniques such as interviewing. The two-step process of triangulation contributes to the validity of the study as does increased description or "thickening".

"THICKENING" DESCRIPTION

In talking to various participants, I had a sense of what I was recording from interviews as somehow being very "thin". The questions I asked could only lead to a limited perspective of the situation. Rob O'Donoghue helped me to deal with this by sharing the idea that language is a process of dis-embedding, hence the importance in research of re-embedding what people have said by contextualising their comments. This involves looking at the person's work situation and exploring specific examples. I guess that this is the essence of "thick description". I have therefore tried throughout this report to "thicken" description and contextualise comments with whatever may be appropriate. See Robert Majola's story in the *Case Vignettes* section of the main evaluation report for an example.

When including a participant's comments I usually include a brief description including a name and giving a sense of the kind of work in which s/he is involved. Though this does not always relate directly to the comment I feel it does give a sense of the wide variety of participants' work contexts thereby "thickening" the overall picture of the Gold Fields course.

"CHANNELLING" RESPONSES

An interview can be a tricky thing! I sometimes worried that in my enthusiasm to hear what people had to say about the course I would somehow "channel" their responses in a particular direction.

In the note from my research journal (8 July 1997, Howick) below I explored this particular concern:
"When I interviewed Cliff I was worried that I was perhaps leading his answers in a certain direction. Was I constraining or shaping his responses? But it is more a question of suggesting that together we look in a certain direction. It as if we were travelling through a town and if he doesn't happen to notice a church or a dam, I might point it out, drawing his attention to that feature, perhaps encouraging a response by sharing another participant's (or my own) experience. To continue with the metaphor, I try to be careful not to restrict what we look at by deliberately only looking for the church, dam, bookshop and then dashing off. Thus I try open-ended questions first like "What do you understand by professional development?". If the response leads us in a certain direction then we head off in that direction. But if there are no forthcoming suggestions for direction from the interviewee, then I make a suggestion and if this reminds the person of (or contrasts with) his/her own experience then I listen to his/her story. But the new story is a particular version of a certain theme. It is the person thickening the description (gravy) with their own particular experience (flavour). There is a process of specific examples of experiences (narrowing) contributing to a richer picture (widening)."

FOCUS GROUPS

Interviews with individuals do offer opportunities for in-depth exploration of specific personal experiences but valuable insights can emerge from group discussions too. Group interactions can lead to sharing and developing of useful understandings as is illustrated by the example below of a focus group discussion held with the Gauteng participants of the 1997 course.

"A special bond amongst members of the Gauteng group was evident even in a short focus group discussion. They were very supportive of each other, encouraging comments and feedback. I had a sense of a rich picture emerging from the group discussion which would surely not have been as evident in individual interviews with members of the group. The group commented freely on changes they had noticed in each other. One specific example illustrated well both the usefulness of regional meetings for encouraging learning and development, as well as the value of group discussion for research purposes: the group voted Andrew as the most changed, "he smiles and talks more", with Andrew himself adding that the group has helped him to speak and write to the point. Here the group discussion enabled the example to emerge of the benefit of group interaction. Needless to say, the Gauteng group were very keen to have a group photo taken after the focus group discussion!" (Research Journal, 6 July 1997, Pretoria).

A PICTURE PAINTS A THOUSAND WORDS: USING PHOTOGRAPHS

Photographs are a good way of instantly "thickening" description. The photograph mentioned above and others are included in the cover collage of this report. They clearly illustrate the cameraderie experienced by the regional groups of participants. These and other photographs included in the main evaluation report illustrate the diversity of course participants as well as provide pictures of some of the course activities and experiences which contribute to professional development of participants.

A BALANCED AND HONEST VIEW

Comments about the Gold Fields course are mostly enthusiastic and very positive, almost overwhelmingly so. This has made it difficult to explore aspects that could be problematic. There are so many good things to report that is easy to gloss over negative aspects. It was also much easier to explore and describe certain aspects dissatisfaction emerged as a particularly difficult one. I realised how difficult it is to listen to and accept an outlook and expectations that differ considerably from one's own. I did try to reflect these opinions honestly though (see examples reported for the Natal Parks Board course in Part VII of the main evaluation report).

of professional development than other more difficult ones such as the whether the course enabled critical reflection.

We tried to offset the postive impressions of the course by actively seeking out other opinions too. I remember one interview in which several points of dissatisfaction emerged as a particularly difficult one. I realised how difficult it is to listen to and accept an outlook and expectations that differ considerably from one's own. I did try to reflect these opinions honestly though (see examples reported for the Natal Parks Board course in Part VII of the main evaluation report).

ORGANISING THE DATA

Noel Gough describes research as a process involving three key components: field work, head work and text work (ref). Often we get caught up with the excitement of the field work, or data collection. In the case of this evaluation this was certainly tempting with enthusiastic contributions pouring in! Eventually one has to stop gathering data and start thinking and writing about what has been collected (head- and text-work).

What was very helpful for our first serious attempt at looking at the mountains of data collected in form of interviews, course materials, course evaluations, photographs, etc., was the opportunity to stay with Linda Paxton (now Biggs) on her farm in the Karoo. Linda had been very involved with the Gold Fields course for a number of years both with writing of materials and as course co-ordinator. Her marriage, moving to the Karoo, and giving birth to twins necessitated less involvement with the course. Staying with Linda enabled Eureta and I to be free of other work distractions as well as to share ideas and benefit from Linda's valuable contributions.

Our first task after reading through what we had collected was to establish themes. Each theme had a colour. We then went through the data very carefully colour coding ideas in order to develop the themes. This process was interspersed with numerous discussions, questioning and grappling and it was good to be able to work together.

"TEXT WORK"

I found it extremely difficult to stay with the writing process. It was essential to set aside time specifically for this and it was imperative to actually go away from my office preferably for a few days. Despite the best of intentions to work consistently following a period away with the intention of completing the process I was never able to sustain the writing process. Enthusiastic spurts of writing were interspersed with long periods (often several months) of no progress. Though it was always very hard to pick up the writing again, "dormant" periods enabled me to pick up the project with new insights and each time the overall picture became clearer.

CHOOSING WORDS CAREFULLY

Writing research is all about choice - the researcher has to continually choose what is to be chosen and written, and what will be left out. Not only must certain words and conversations be selected from what can be heaps of data, but one's own words can subtly influence the tone of the research. The words we choose become metaphors indicative of different views on knowledge and our role in interpreting and reporting them. This was very clear to me in an example pointed out by Eureta, my supervisor, relating to my frequent initial choice of the verb "claim" when I used a quote to illustrate a participant's point of view. I would often write that a particular person "claimed that" the course contributed to this or that. Eureta felt that words such as "expressed the view that" or "offered" or "indicated" or "explained" would be more appropriate. As she put it, "I think you are less of a judge or assessor looking at 'claims' and more of an illuminator giving voice".

ENDING WHERE YOU STARTED FROM

> We shall not cease from our exploration
> And the end of all our exploring
> Will be to arrive where we started
> And know the place for the first time
>
> T S Eliot *Little Gidding*

As I write up the final version of this research report I realise that only now am I feeling clearer about what I set out to research over two years ago! If I continued the process I might feel the same way in another two years. Re-search is clearly a process of searching again and again and again...

THE ROLE OF THE GOLD FIELDS COURSE IN PROFESSIONAL DEVELOPMENT

The theme of professional development emerged from course participants' comments during the ongoing review of the Gold Fields course over the years. It was important to explore what exactly professional development meant to them and us in our experience of the course. Some of the descriptions, gathered according to the various data collection techniques described above, follow and illustrate the wide range of aspects encompassed by 'professional development'. Many participants described it simply as *"doing one's job better"*.

> *"Professional development in environmental education is definitely about understanding and doing one's job better, including continual evaluation of one's self approach to environmental education"*
> Robbie Dyer, education officer at Umgeni Valley Project

> *"It means understanding and competency plus committing yourself to what you are doing and making progress"*
> Benfred Dlamini, environmental awareness officer at the Natal Parks Board

> *"I understand it as being able to do my job profitably and productively, which will in turn help the entire community as well as the world to a sustained balanced justice development for survival"*
> Robert Majola, game guard for the Mvoti Vlei conservancy in KwaZulu-Natal

> *"Understanding what you do, and taking time to think about what you do, not just doing something because someone else says it's a good way of doing it"*
> Heila Lotz, course co-ordinator

Course participants work in a wide range of contexts. This results in a diversity of responses and views about what their work as environmental educators entails.

More specific comments pointed to professional development involving a critical understanding of the kind of work they do, and the development of a broader understanding of the environment, of environmental education and of the professional field of environmental education practitioners. Participants also mentioned the development of various skills such as writing and presentation, and broadening one's professional network, which also contribute to working more effectively. We sought opinions on the nature of professional development from a few of the employers of participants too.

One participant's employer's perspective included the following as professional development skills resulting from participation in the Gold Fields course: being able to communicate effectively, organising and running workshops, materials

development for classroom use. Another employer listed "*project planning - looking at problems objectively with a vision of what you aim to achieve; evaluation of the results - look at the pro's and con's and build on them; writing and presentation of projects*". One employer commented on "*a new professional maturity*" in his employee after he had participated in the course. He listed the following as skills he thought would contribute to professional development: "*academic discipline, ability to debate professionally, ability to see a project through from start to finish, work confidence*".

Various aspects of professional development through the Gold Fields course are explored below in clusters of ideas that have been gathered from the evaluative comments of course participants. The following aspects will be discussed:

- "Seeing 'Environment' with Opened Eyes": New Understandings of 'Environment' and of Environmental Education
- Changing Approaches to Work
- Becoming Better Equipped with Improved Job Skills
- "Feeling Bold": Increased Confidence in the Work Context
- Learning from Each Other: Developing Networks
- Equipping Ourselves with Tools for the Job: Developing Resources

After discussing the clustered experiences which reflect various dimensions of professional development, I explore the issue of professional development in a little more detail by exploring some of the literature in this field. There is careful consideration of the critical orientation of the course and of the course as an opportunity to enable professional development through praxis.

"SEEING 'ENVIRONMENT' WITH OPENED EYES": NEW UNDERSTANDINGS OF 'ENVIRONMENT' AND OF ENVIRONMENTAL EDUCATION

Many participants have commented on how the course has given them a broader understanding of the concept 'environment' and of what is involved in environmental education processes, and that this has contributed to doing their jobs better. Our notions of environmental education are closely linked to our views of the concept 'environment' (O'Donoghue & Janse van Rensburg, 1995). This was illustrated by the way in which the two ideas were frequently mentioned together, almost in the same breath, by participants. The following is a typical comment *"now I understand what is EE and I know what is environment. Before I thought environment was only green issues, now I know it is green and brown issues..."*. The course interactions seemed to have assisted people with, in their own words, narrow understandings of what is involved in environmental issues and in environmental education, to broaden these views: Antoinette Mofokeng, a technikon student of nature conservation, claimed that she learned through the course *"that EE is not only for nature but everything happening around us"* and *"...the environment is not only where you live but all systems are interrelated"*.

Nicola Jenkin added that when she did the Gold Fields course she had an Environmental Science Honours yet hadn't formulated such a sound understanding of 'environment': "The Gold Fields course's understanding of 'environment' is the most useful I have come across especially in the light of the social issues I deal with.

In the Gold Fields course this broader understanding of the environment comes not only from interacting with the course materials (Theme I explores the issue of environment crisis as wheel of interacting biophysical, political, social and economic concerns) and exploration of our own contexts through assignments, but also from the participation in the course with a wide range of people and their different contributions. Jimmy Belelie who works with children at the aquarium in Cape Town claimed that *"the course made me realise that the environment does not only entail the biophysical but also political, economic and social issues. This was brought especially to the fore because we had students in our group who were involved in diverse aspects of the environment"*. This opening up and narrating of ideas for the context of one's work is an interesting instance of professional development from a course curriculum which is more than the file or course materials.

Other participants have commented on how the course has, in the words of Henrietta Buys, *"opened my eyes to other ideas and made me think more of what I am doing, by seeing what other people do. One tends to do what one thinks is best but this course has taught me to do more"*. Rowan Herring, a part-time Education student at the Peninsula Technikon in Cape Town who also assisted staff at the Environmental Unit with a community-based initiative, added that the course has been a *"real eyeopener"* which has led to him challenging his own thinking and methods used. Sizwe Mabizela, an Eastern Cape Nature Conservation environmental education officer, claimed that since the course he is no longer able to "*turn a blind eye*" - *"it has forced us to be more observant... the course pushed us, we were just officers and the course pushed us to look more carefully and critically at things we might otherwise have ignored or not noticed"*.

Sometimes this new understanding comes from critical reflection on the work we are doing. David Jacobs, an education officer at an environmental education centre who now works with communities in the Shongweni region in KwaZulu-Natal, claimed that *"the Gold Fields course has created a picture of the environment and an understanding of environmental education which no other course has done"*. When asked whether his present job is influenced in any way by his experience of the Gold Fields course, David replied:

> *"Yes - it has allowed me to critically evaluate the work I do and EE and understanding of theories from the course gives me insight into difficulties and situations which I am faced with and EE forms an integral part of my work even though it is not in my job description/company mission statement. I have a broad view of EE and environmental definitions"*.

The Gold Fields course is frequently an introductory course for people who are new to the field of environmental education: comments like "*I was not working in EE at the beginning of the course ... in my opinion I would not be able to do the job I am doing now without that basic knowledge*" were quite common. Kate Davies, a teacher in the Kokstad region who was keen to set up an environmental education centre with her husband, an Anglican bishop, on their farm, also felt very new to environmental education and valued being able *"to get a feel for a hugely diverse field and to know what was out there"*.

Others have described a developing sense of clarity and direction in their work: *"[The course] has put me in touch with myself and what I am doing ... attending this workshop gave me direction as regards my programme. It has also helped me confirm my objectives for this job"*. Another participant noted that the course has *"allowed me to further interrogate my understanding of EE and review the implementation of programmes within the Environmental Unit [in which I work]"*. Participants also valued the fact that the course seems to provide a context or framework within which environmental education practice can be understood.

Several participants mentioned a sudden realisation through the course that they are actually involved in environmental education processes! Kathy Stiles, co-ordinator of the Zimbabwe Gold Fields course run through Speciss College, replied enthusiastically when I asked her if she had noticed changes in her students "*Yeah! Most of them when they first started didn't know they were doing EE in their work*". Nokuzola Mgxashe, an Eastern Cape participant who works for an agricultural research council, had not realised that through her work she was supporting environmental education processes. When she began the course she had only recently started her job, and she claimed that the course has helped her to work out ways of carrying out her new job. This realisation that the work we do can be called environmental education is a significant one. It helps to give an identity to what we do, enabling us to slot into an environmental education community and network and benefit from the support that these offer. Truus Hedding, for example, valued *"becoming part of the EE process in South Africa"*.

Although this coming to identify with environmental education and becoming an

environmental educator can be useful, it can also be problematic if it results in identifying with environmental education as an institutionalised 'thing' restricted to particular techniques. A developing sense of environmental education as a set of techniques was evident amongst some participants who felt that they needed to acquire certain skills from the course and in some cases, felt unable to "do" environmental education like they had seen it done at projects visited during the course, because they did not have the same equipment.

In a paper entitled *'Environment as Text': Initial Insights into Some Implications for Professional Development in Environmental Education* (1998), Lotz and Robottom describe a capacity-building project which adopts a research-based approach to professional development. They claim that for "professional development in environmental education to be useful, it needs to recognise the diversity and complexity of the environmental issues that form the substrate for its curriculum" (9). If, as proposed by Stables (in Robottom & Lotz) we regard the 'environment as text', a source of curriculum activities, and environmental education as an educative exploration of environmental issues, this will have important implications for professional development in environmental education. In each professional situation environmental issues will be diverse, complex and vary in different contexts, and a thorough exploration of our particular environments will provide the shared orientation and useful models of process that might be experienced as professional development. Enhanced understandings of the contextual complexities of a work situation and developing a broader understanding of environment appear to be key processes contributing to professional development.

Sometimes this sense of a developing understanding of environment and environmental education can be seen as a form of praxis - when the way in which we work is affected by and affects our understanding. The following comment from James Belelie from the Two Oceans Aquarium in Cape Town indicates this link: *"[The course] gave me a completely new insight of how to go about my work. My concept of EE changed and simply grew and grew"*. In the next section, the focus will be on the effects of a developing understanding on participants' work.

CHANGING APPROACHES TO WORK

For some participants changing and broadening views of the environment through course participation have led to changed approaches to their work. Athol Davies, a youth worker at L'Abri Wilderness Leadership Training School in KwaZulu-Natal, attributed a broader approach to environmental education to no longer focusing solely on the natural environment but looking at the human and social environment and how this impacts on the natural environment: "*My approach to the courses I run is more sensitised to the complexity and interconnectedness of the environment*". Participants frequently commented on changing their approaches in their work through the Gold Fields course. The core text of Theme III of the course materials focuses on trends and patterns in environmental education, and a range of approaches to environmental education are outlined here. Also, in the national workshops and

regional tutorials participants are exposed to new ways of teaching and learning. Rosie Campbell, materials developer for the Use, Speak, Write English (USWE) Trust focusing on adult basic education, described how, when she was asked to give a 3 hour workshop on designing educational materials for students of Adult Education at the University of Cape Town,

> "*the methods I used were mostly from the things I have learnt in the Gold Fields course. The workshop went very well and I was proud of how I did it!*".

Boniswe Belot from the Group for Environmental Monitoring in Gauteng said she previously used to lecture people, but then tried alternative methods from the Gold Fields course workshops and the 'pink' booklet, *Environments & Methods* ; she "*lets the community lead with their needs*". Shoni Mphaphuli claimed to have become more flexible in how she now teaches her Geography Education students at the University of Venda.

This small Share-Net booklet (1995) is part of the course materials. It links changing views of the environment with changing methods in environmental education. In the past the environment was seen as the physical natural world that was at risk. As our understanding broadened to included historical processes and the environment came to be seen as interacting biophysical, social, economic and political processes, a range of approaches developed. The booklet suggests such a range of methods is needed in differing contexts of environmental education.

Mlungisi Nzimande, a high school teacher in Rorkes Drift, said he has "*received or attained different approaches to different topics which made me to teach a little better than before*". It is interesting to note this in the light of Mlungisi not doing the course to improve his teaching but because of his concern for his local environment. He spoke in detail about the experience of working in groups on the course and of how useful he found this. He had always used a 'chalk 'n talk' method of teaching but decided to try dividing his class into groups, an approach similar to one used in the Gold Fields course - and claimed that it was a great success!

There are other striking examples of changes that participants have recognised in themselves. One participant remembered 'preaching' in a workshop with teachers prior to participating in the Gold Fields course; "*today I am able to sit down with colleagues, share experiences and help each other with problems, and not only concentrate on my own success*". 'Standing up and preaching' is being complemented by 'sitting down and sharing' and people are becoming 'colleagues' rather than 'targets'. Pinkie Mahlungu, an environmental officer working with teachers in Ermelo, describes how she became less prescriptive:

> "*As environmental officers we used to wonder why teachers were not supportive of our projects. Through this course I have realised that it is not correct to prescribe to people what they should do, but rather discuss with them and do things that are relevant...*"

Stanford Spotsi who works for the Department of Economic Affairs, Environment & Tourism in the Eastern Cape, also claimed to have changed his attitude: "*before I thought I had to know all the information, top-down addressing, now ... I like my learners to participate in whatever I am doing*". Stanford contrasted the Gold Fields course with a previous study programme which dealt with "*only awareness, that is the general thing that can be done by anybody in a taxi in a reserve*". We both laughed at this idea of 'taxi-teaching'; Stanford claimed to have definitely changed his approach from this!

Truus Hedding who works for the Delta Environmental Education Centre in Johannesburg also claimed to have changed her approach: "*In my approach to groups visiting our centre I realise I was very much oriented towards passing on knowledge. I now have more confidence to 'let go' and allow children to learn rather than be taught*".

A key tension arises here: changes in teaching do not necessarily mean changes in pedagogical concepts. A careful look at the discourse used by some of the participants interviewed suggests that these may be superficial changes involving the acquisition of more 'politically correct' rhetoric and the replacement of one set of techniques with another. Words such as "*received*", "*attained*" and "*it is not correct*" reflect that this may be the initial adoption of a new technique as orientation within new language through shared experience without a developing understanding of *why* one does something in this way. Are people simply saying what they think is correct? How meaningful are these apparent changes? This issue is picked up in the discussionwhich follows later in this part of the report on praxis as a metaphor for professional development on the Gold Fields course.

Rob O'Donoghue has commented that it may be that change happens in these ways and sediments in new and more useful orientations that come to be later realised and articulated with a congruence beyond disembedded rhetoric to impress.

BECOMING BETTER EQUIPPED WITH IMPROVED JOB SKILLS

While some participants have commented on becoming more flexible and changing their approaches to the environmental education processes in which they are involved, many others have mentioned learning a number of job skills which have contributed to their professional development. These improved job skills include the development of more confidence with a computer, better organisational skills (*"development meant for me that I began to organise my work in a structured way"*, commented one participant), and improved writing and presentation skills.

Many participants have commented that the course has contributed to their writing and presentation skills by providing an opportunity to use and practise these skills with support and encouragement from tutors and other students. Besides the more general skills of developing a good structure for an assignment with a coherent and well-supported argument, there are finer details to consider such as correct referencing. Andrew Mathabathe who is based at the Delta Environmental Centre in Johannesburg saw something about plagiarism on television at the same time as receiving a draft assignment back from his tutor with comments on inadequate referencing. The two experiences made him realise the importance of acknowledging sources of information. Having to hand in the assignment again, this time with improved referencing, provided Andrew with an opportunity to practise the skill of referencing.

A number of participants have commented on how doing the Gold Fields course has assisted them with developing skills which are useful for other study programmes. Robbie Dyer, previously an education officer at Umgeni Valley Project and now studying for a National Diploma in Conservation through the Port Elizabeth

Writing and re-writing of assignments is an integral part of the Gold Fields course. This process orientation to assignment writing differs considerably from the more conventional practice in many courses of producing a product which is completed finally before being marked once. (See section on assignments in course orientation - Part III of the main report).

Technikon, "*finds [himself] using the many skills the course taught (him), for example, in assignment writing, presentations, group discussions and practical projects*". Antoinette Mofokeng studies nature conservation at the Pretoria Technikon. She commented that the Gold Fields course is more 'people-centred' than her nature-oriented technikon course and that the two complement each other well. Of the former she said: "*I learned to write assignments which I never knew how to write before and it helped me a lot with my studies*" and "*it gave me confidence to present what I feel in front of people because on the Gold Fields course we presented our assignments after we have written them, so that helped me with my community conservation speeches*". Antoinette compared the way she is expected to write assignments for her technikon course with the writing of Gold Fields assignments: "*Writing for this course (Gold Fields) it is as if you are writing for yourself, not the lecturer. Writing assignments for tec you write, hand in, get a mark, and file away. Writing for the Gold Fields course you write a draft, hand it in, rework, hand in again*". When I asked her which 'system' she preferred, Antoinette chose the Gold Fields way of "*getting it back and then writing it again till it's fine, improving it*". I added that I thought the method of writing a draft, handing that in and reworking it later was more like the real-world situation where, if we ever write articles for a journal or magazine, we would write them, show them to others, and improve the original with feedback from others. The Gold Fields course provides a good opportunity for practising this skill of writing and sharing, reworking drafts a number of times.

During the Gold Fields course participants can negotiate with tutors about their work requirements, and can use opportunities that the course provides to develop skills that are useful in their particular contexts. Some participants may want to improve their skills in writing assignments for other courses of study while others may need to learn to write better reports for work. Thus, while Antoinette and Robbie may have valued the opportunity to develop skills which have assisted them in their conservation studies, other participants have commented that writing Gold Fields assignments has contributed to writing that needs to be done at work as noted by Pinkie Mahlangu: "*At work I am expected to write reports each month. Through assignments ... my report writing skills have improved*".

The way in which the course is structured with assignments for which participants must draw on their work, encourages people to write and therefore think about something that is appropriate and important to their particular situations. This point has been explored earlier in the idea of 'environment as text' and the implications of this textual practice in professional development. In this way, the Gold Fields course appears to foster professional development that is relevant to participants in their work situations. This is one way in which this course differs from many other academic courses which are not as centred on the articulation of practice in and out of work situations.

Learning to write is a valuable professional skill which many participants feel is improved by writing assignments for the course. Participants have also mentioned the benefits of using the products of the course, what they have developed and written for assignments.

Some Gold Fields assignments have been useful to participants' organisations for the development of policies and other institutional documents. Stephen Mugivi from the Department of Agriculture, Land & Environment in the Northern Province, described how two of his Gold Fields assignments had assisted his department to draw up a policy on communities residing around the parks and reserves. Debbie Hall, an education officer at the Helderberg Environmental Education Centre noted: "*The knowledge gained from the course, particularly assignment 2, has been used to develop environmental education centre management policy*".

Paula Morrison, a community conservation officer for the Natal Parks Board in Northern KwaZulu-Natal, mentioned that her organisation continues to use an assignment she developed for the Gold Fields course as a basis for a Natal Parks Board (NPB) planning document. Paula also highlighted the benefit of learning to write better through participating in the course. Having been out of the formal education system for a fairly long time, she found assignment writing quite challenging and thought that "*that kind of writing contributes to your everyday writing - writing reports, policies, programmes, report-backs, minutes, whatever it is, it actually contributes to making you write better*".

Having completed the Gold Fields course, Paula assisted with tutoring a Gold Fields course run for education officers of the NPB. She commented on how their administrative and organisational skills were greatly enhanced by having to compile and manage the course file, keeping things in order and adding in new parts in appropriate places. She mentioned the improvement of writing skills in the people she works with that participated in the course too. They are also much more able to work independently and organise their own things now as their networking skills have grown: "*they know who to contact, where the resources are, who to go to ...*" Another NPB participant confirmed he does his job better because the course has helped with better planning. There is also the benefit of becoming more familiar with environmental education discourse through readings and course interactions to consider: this familiarity appears to have contributed to a greater confidence, the next aspect of professional development I wish to discuss.

"FEELING BOLD": INCREASED CONFIDENCE IN THE WORK CONTEXT

Developing skills which contribute to the work that we do will usually result in greater confidence. More confidence can in turn lead to greater enthusiasm and better working. Participants frequently mentioned increased confidence as a benefit which developed through their doing the Gold Fields course. For them, developing confidence contributes to doing their jobs properly and fully, and in some instances, to working critically and even to challenging the *status quo*.

Alison Kelly, tutor for the Western Cape in 1997 and an education officer for the Wildlife & Environment Society, illustrated the first of these two aspects in her

comment that three of the six students in her group "*reflected examples of how the course had built their capacity to engage more fully and confidently in their work environment*". Stephen Mugivi who completed the course in 1997 and is now a tutor for his region claimed to be able "*to run teachers' workshops without any fear due to the experience from the Gold Fields course*". Benfred Dlamini works for the Natal Parks Board and commented on newfound confidence at work following participation in the course:

> "*we can sit together at the table and I am also able to contribute ... before that we used to just come and sit waiting for our superior to talk and ask us. We would only give the answer, not comment when we were sitting in management meetings. We didn't have that confidence to raise up your hand and comment but after we done this course we have got this confidence, that now I can say what I want to say*".

Some participants described a sense of empowerment that develops through participation in the course when they realise that they can work as a team involving others and no longer believing that "*there was nothing I could do to solve EE problems*" nor that they had to be dependent on 'authorities'. This would link to the understanding in the course of knowledge as a socially constructed process rather than a fixed body of authoratitive expertise.

Course confidence also contributed to critical thinking and the ability to bring about change. Debbie Hall explained that "*the confidence which comes with knowing what current views/methods of environmental education are, has enabled me to argue for the 'new' plan [for the environmental education centre where she works], greatly disturbing the status quo, ie. the course has given me the confidence to take action*". Another participant confidently concluded her evaluation of the course with "*we've worked together to bring about small significant solid changes where we are. I think that is what it is all about*".

Some participants indicated that their experience of the course had given them more confidence not only in their dealings with groups with whom they work, but also in relationships with colleagues. With groups they now had the courage to try out new approaches, especially more participatory ones as experienced in the course (discussed in the previous section on **Changing Approaches)**. Others voiced that they felt more "*equal partners*" now in relationships with colleagues. One participant also mentioned "*getting more confidence to not just listen to what people like Rob [O'Donoghue] are saying but to kind of engage every now and again*".

Cliff Maunze, a regional trainer for the BEST (Better Environmental Science Teaching) programme which is concerned with redeveloping the Environmental Science curriculum in Zimbabwe, described his new confidence since having participated in the Gold Fields course as feeling "*braver*". His writing skills have improved, and while he has already written for the local Wildlife Society magazine, he now feels more confident to write for a 'bigger' magazine. One of Cliff's fellow participants is involved with radio and has asked Cliff to go on the air several times - he feels confident about this now too!

A specific example mentioned by a number of participants and attributed to their experience of the Gold Fields course was the confidence to give a presentation at the EEASA conference. Course participants expressed a different kind of experience of EEASA due to increased confidence which enabled more active participation in the conference; they were more able to share and present, rather than simply listen and learn. Ingrid Schudel, education officer at the Thomas Baines Environmental Education centre in the Eastern Cape, thinks she would not have had the confidence to do presentations at EEASA (she had co-presented two!) but for the course experience. Mvusy Nangu from Golden Gate National Park in the Free State also expressed that the course gave her confidence to prepare a paper for EEASA '97 - what she called a "*visionary paper on an OBE approach into our activities*" (even her words reflect her confidence!). Mike Ward, at the time education officer at the Drakensberg Wetland Project in KwaZulu-Natal, says he "*wouldn't have had the courage to be involved in an EEASA workshop if I hadn't been involved in the course. It just gave me that extra little bit of courage*". Ingrid, Mvusy and Mike, all 1997 Gold Fields course participants who had not previously worked together nor presented at EEASA, planned a joint EEASA presentation during the first national workshop for the Gold Fields course.

The Environmental Education Association of Southern Africa was formed in 1982. The annual EEASA conference provides an international forum for environmental educators to share and develop ideas in research presentations and workshop sessions.

Shoni Mphaphuli, a lecturer and researcher from the University of Venda said the course motivated and inspired her: the assignments and the tutors' support led to her making a presentation at EEASA '97. She felt confidence as a learner, and in developing her own resources: "*After writing the first assignment I felt motivated to do research on a very sensitive topic - land degradation of the mountains in the Northern Province. I ended up writing a paper which I did present in the EEASA Conference '97*". Shoni subsequently had the confidence to submit the paper for publication in the Southern African Journal of Environmental Education. The course has truly inspired Shoni: in her own words, "*the Gold Fields course was my first time to do environmental education*" and she now teaches a module for a Bachelor of Education course and intends to register for a PhD in environmental education for which "*I am definitely going to succeed*"!

The aspect of developing confidence is a good illustration of an intermeshing between personal growth and professional development demonstrated by comments like "*I became a new person ...*". Azeza Fredericks from the Peninsula Technikon Environmental Unit (mid-course she moved to manage a resource centre for the CSIR) attributed her confidence to the excitement of learning within the dynamically supportive environment of her regional group: "*this has encouraged me to fight the many 'demons of perfection' that have been so firmly embedded in my mind through past educational experiences. Facing these fears has made it possible for me to begin to think about writing science materials with an environmental education methodology and to see this as a process rather than a product. This is still very daunting but I am willing to take those steps...*" As indicated by this example, personal confidence clearly cannot be separated from an improved professional capacity.

Increased confidence is not necessarily well-founded for not all confidence is deeply rooted in sound educational practice. (This key tension is discussed in greater detail when the issue of praxis is raised). A particular set of comments which relates to

this point will be discussed below as it highlights limitations to the notion of professional development. A number of participants seemed to gain reassurance from learning about well-known international guiding principles of environmental education such as those developed at an intergovernmental conference in Tbilisi, Russia in 1977. Confidence came from being able to refer to principles, objectives and aims. These might give people status and identity, or a sense of having clear guidelines or legitimation for what they were doing.

The Tbilisi conference, organised by UNESCO, brought together delegates from 60 UN member states and from 20 international NGO's. They were unanimous about the importance of environmental education in preserving and improving the worlds's environment. The Tbilisi Declaration was developed and listed five objectives and 12 principles of EE which are still widely quoted today. Since Tbilisi there has been a proliferation of conferences aimed at developing internationally accepted principles and objectives, for example, the Earth Summit in Rio in 1992 produced Agenda 21, and a parallel gathering of NGO's which met simultaneously produced a set of Principles for Equitable and Sustainable Societies.

JOINING THE TBILISI TEAM

Part of what builds confidence is knowing about trends and patterns in environmental education, and learning about the bigger picture and discourse within which one is working. Throughout the evaluation course participants frequently referred to the 1977 Tbilisi principles for environmental education. These are introduced and explored in the course in the core text of Theme II: environmental education as a developing response to the environmental crisis.

Participants of the 1997 course developed their own criteria for assignments. The importance given to these international principles is reflected in the fact that they were included in criteria developed by at least two regional groups. "There must be references in this assignment to international principles for EE" was a criterion developed in the Eastern Cape and, in KwaZulu-Natal, "We need to make links between our experiences (examples) and the readings (especially international principles)".

The principles sometimes seemed to give a sense of authority to those who become familiar with them. During the process of establishing a local environmental forum at Vredefort, Jabulani Kumalo, from the Free State Department of Environment Affairs and Tourism, was able to draw on the things he had learnt on the course and "*was proud to refer to the Tbilisi principles*". The principles seem to also function to legitimate or validate ideas as is illustrated in the next example where a participant, Noluvuyo Mancunga of the Fairest Cape Association felt that the project for which she worked needed to be modified because "*it had no guiding principles nor objectives, and looking at international principles like UNESCO and Tbilisi I found out that what we were doing was in line with international EE principles but it is such that they are not clearly set up*".

Rowan Herring reflected a sense of obligation to the international principles when he noted that "*planning work for projects has become more focused to comply with EE principles*". His suggestion for how the course could be changed to improve professional growth was "*a more intense grappling session on the principles and values*". It would be good to take heed of his proposal given the great sense of attraction the principles seem to hold, and considering the problems that could result from a superficial use of the principles simply as powerful validating rhetoric and intimidating others (this is hinted at in comments such as "*I was proud to refer to the principles*"). If there is a shift from working according to the context, to working according to externally devised guidelines, a project could lose its flexibility,

responsiveness and relevance to the context. If principles are overvalued and used uncritically as a somewhat blind directing rhetoric without intuition and locally-devised options, they could diminish the creativity and sense of responsibility of the project executants. It can, however, also be useful to be guided by explicit ideas and principles which signify key dimensions of work in context that might otherwise be overlooked or simply be taken for granted.

What seems to be important is meaningful engagement with the principles rather than a superficial acceptance of and attachment to them. The challenge is for the course to help learners to neither fall victim to the validating power of the principles, nor to wield them as some kind of power tool to mystify and impress others.

I wonder if this attachment to the principles, which we have dubbed 'Joining the Tbilisi Team', is a South African phenomenon coming from our isolation in apartheid times, or perhaps even more broadly, an African phenomenon, reflecting a lack of confidence in our own directions, a need for guidance and a desire to validate what we do by using international trends as a yardstick. It could even be a way of giving the work we do in environmental education credibility and status - "See it's international!". It may be simply a question of seeking guidelines; there are, after all, no specifically South African principles for environmental education processes of social change. Seeking written, generally agreed-upon guidelines reflects a desire for certainty in the context of so much chaos. As environmental educators we are not only faced with all the uncertainties that come with working with people, but also with the complexity of the bigger picture of the socio-ecological crisis that motivates and shapes our work, so the wish to find some clear guidelines to tell us what to do in the face of all this is understandable. It is this subverting of the principles as 'biblical verse' and their use as evaluative frameworks in reflection on practice that is important.

A few participants gave examples of how the principles could be seen as a form of guidance or a framework which gives useful direction to the environmental educator. Zanele Mtshali from the Ermelo Environmental Education Association has commented that, through the course, his knowledge of environmental issues and principles guiding environmental education has broadened tremendously and that this helps with his work with teachers. Alex Larkin, working in adult basic education for the USWE Trust, described how, in her own teaching, she has "*thought about causes and effects of issues, clarified aims of lessons and used environmental education objectives as a framework for structuring lessons*". Alex has used the UNESCO objectives to create "*a learning-cycle-kind-of-check-list that teachers can use to draw out various awareness skills, understanding and participation from a particular environmental education topic which teachers might use as a basis for a series of lessons on these topics*". Alison Kelly, 1997 tutor for the Western Cape region, also reflected on an engagement with the principles of environmental education, this time the principles developed in Rio in 1992 at the International Forum of NGO's: "*I think I had this wrong idea of what tutoring was...it's a completely different orientation ... that first point in the Rio principles "we are all learners and educators" has been an amazing thing to see ... and [tutoring] is most certainly not a top-down controlling kind of thing - it's very much right there stuck in*

the middle, grappling with issues as much as everyone else is". In this instance of praxis, where the principle was actually used and not simply adopted, it helped her to understand something better.

LEARNING FROM EACH OTHER: DEVELOPING NETWORKS

"*I am learning from others and they are learning from me*"

A significant motivation for the development of the Gold Fields course was the perceived isolation, both conceptual and geographical, of practising environmental educators (Janse van Rensburg & le Roux, 1997). The evaluation shows clearly that the course has addressed this issue for many participants. One participant described the course as "*a fantastic networking course*" and valued "*meeting with diverse people, sharing ideas and struggle*". Nic Shaw, based at an environmental education centre in the Drakensberg, valued opportunities for '*idea pollination*': "*working as I do in a geographically isolated place I found the most value in interacting with others in the field*". Some participants felt that more use could be made of the opportunity for networking at the national workshops by, for example, enabling participants with similar interests to work together in certain sessions.

Despite the great distances which participants often have to travel to meet for national workshops, these seem to be valuable as the following comment from a guest presenter illustrates:

> "*It is wonderful to see how serious most of the participants are about the course ... The benefits of getting the whole group together are enormous in terms of sharing ideas and different approaches from the regional groups*".

Mike Ward also stressed "*the introduction to a variety of people involved in EE*" as an important contribution to his professional development: "*this enriches my work (and I hope the work of others) by providing a forum for sharing and developing new and more appropriate ways of doing environmental education*". This indicates that the networking is not simply for its own sake - it has purpose which makes it worthwhile

One of the highlights of the course for Robert Majola, a game guard in a small and rather remote conservancy in KwaZulu-Natal, was the national workshops where he could meet other environmental educators and they could share their various work experiences. He remembered going to Cape Town (a first, as was the trip on the aeroplane): "*They used to say to me 'Where are you from?' and I would say 'Seven Oaks', 'What work do you do there?', and I would explain to them and ask them what work they were doing... and I would ask 'Why are you working like that?' 'Because I am from an agricultural organisation, your work is different to mine*'". Sharing work experiences and learning from each other, as well as developing a

sense of being part of a community, opens up possibilities which are an important benefit of networking.

Tembeka Dambuza, a past student and presently a tutor on the course, continues to amaze her colleagues with her contacts:

> "*My network has really increased. My friends in Durban say I seem to know more about EE than all of them - I manage to get to the phone and I get help from a lot of people*".

When I said I was surprised that more people had not mentioned this regional network support (it is something I, as a past participant of the course, continue to find very useful too), Tembeka said she thought that participants tended to take the network for granted when they met on a regular basis for workshops and tutorials: "*It's only later you find yourself calling for all sorts of things!*" The course itself provides an instant opportunity for networking, but it is often only later that participants find themselves referring back to the contacts they made during the course. In other words, one may only realise the value of networking opportunities opened up by the course later, when one has completed it. This point of time of "painting a different hue" is discussed in more detail in the preceeding methodological section.

The Gold Fields course is frequently the first time that participants hear about the Environmental Education Association of Southern Africa (EEASA) and many find becoming part of this network with its 400 members, annual conference and publications, extremely valuable.

Participants also commented on the link established between themselves and the wider environmental education community through the course. People working in the field of environmental education often find themselves in isolation without support or interaction even within their own organisations: "*I'm working in a vacuum*" is not an uncommon comment. They therefore value the way the course helps to overcome the isolation and lack of support. Heila Lotz commented that "*in the vacuum that I found myself in, the course was my lifeline*". Connie Botma who works with environmental clubs in Namibia, joined the Western Cape group in 1996. She said she "*felt lost*", on her own without contact from others, and that she valued the support from others and becoming part of a community of environmental educators through the Gold Fields course.

Many participants commented enthusiastically on feeling part of a new network that really *works*! The setting up of networks is also popular at a national, governmental and international level, for example the IUCN and ECOSA networks, though often these networks seem to exist in name only and do not involve much interaction. This contrasts with the course network that tends to develop 'organically', out of real need, and which seems to be based on genuinely valuable interactions between participants. It seems that networking is most useful when taking place between people who work around something specific, for example, a resource or a course (see also Taylor 1997). Perhaps the Gold Fields course network works because the people who make up the 'net' are sharing course experiences and doing work which benefits from sharing. Thus this network enables purposeful connections to develop

and is in fact the result of these connections. The examples of Mlungisi and Robert which follow shortly illustrates this point.

Professional development can easily be interpreted as an individualistic activity yet we develop professionally contributing to the work of a community of environmental education workers. A former course participant explained that he wanted to become a tutor so that "*I could be of benefit to those on the course while simultaneously engaging in my own ongoing development as a member of the environmental education community*". Tutors in particular seem to benefit in terms of professional development and will be discussed in a separate section which follows.

This notion of networking within a community is further illustrated in the next example. I had the opportunity to interview Mlungisi Nzimande, a 1996 participant who teaches in Rorkes Drift, when he popped in unexpectedly to my place of work. He had come for a resource that my colleague, Nathi Ndlovu, had developed for an assignment when he too was a participant on that 1996 course. This example illustrates useful networking between participants (myself and Mlungisi; Nathi and Mlungisi) even a year after the course had been completed.

Mlungisi had kept in contact with another participant who had been on the same course.

> "*I have written to one of the colleagues, Robert Majola. In fact he wrote to me one day explaining the advantages he is having from doing the course. At that time I was already doing the [another] course in Pietermaritzburg and then I wrote to him explaining the benefits I gained from working with him. I think you remember we were together in that group so there was a sort of appreciation of working together [he was referring to a group assignment we did - Nathi, Robert, Mlungisi and I, in our KZN region]. And I have also introduced the course I am doing in Pietermaritzburg because it may be useful to someone like him who is working mainly in the community*".

This is an example of how participation in the Gold Fields course can be accompanied with an appreciation for working together as colleagues. Significant relationships with a certain quality, something of substance, seem to develop between course participants. As Robert Majola put it, the course "*developed the human relationship which I think is the vital source in EE*". Another participant commented on how good it has been to develop relationships through meeting and working with environmental education 'academics' who otherwise may have remained as mere names on journal articles.

We observed strong bonds developing between members of regional groups in particular but also between participants who only interacted in the national workshops. A good example of this is the Gauteng group of 1997. Shirley Edwards was a tutor in this group which she described as '*nurturing*'. She added that the group interactions were an '*enabling situation*' in which participants felt safe to question and take risks: "*sometimes we discuss other things besides environmental education, like cross-cultural things - this is part of the learning process, learning about other*

people's environments". Actually "cross-cultural things" are not separate from environmental education processes. Working together with a wide variety of people leads to a useful broadening of perspectives on, for example, environmental issues or educational processes: Shirley added that "*some people become very insular in their situations - the diversity in this group gives fresh perspectives*".

When the Gold Fields course was adapted for the Natal Parks Board, whose education staff are spread throughout the KwaZulu-Natal region, Barrie Barnes, one of the participants, commented on the value of the opportunity to meet with personnel from other regions for course workshops. Paula Morrison who participated in both the in-house NPB course and an earlier national Gold Fields course, commented on the benefit of the latter for exposing her to a wider community: "*because there are a lot of people in the NPB you sometimes tend to be fairly insular*" and she found it very exciting to become part of a larger group of environmental educators sharing and engaging with common issues.

How do we continue the network developed in the course?

At the end of each Gold Fields course there is always an enthusiastic desire amongst participants to continue the network developed during the course. There is often a recommendation in the final workshop and written course evaluations for development of a course 'directory' with a collection of the resources that participants have developed as assignments. There is a wish to capture the sense of richness of the moment and a desire to hold onto it and take it further. The recommendation is always carefully considered but the time and expense of producing such a directory is relative to its potential value. Many directories and databases exist and many are in our experience used only infrequently. It is the actual happening of a 'live' course and people's involvement in the whole process of the course that gives it a special quality that would be impossible to capture in a collection of the physical products or outcomes of the course. Following the 1997 course it has been decided that after completion of the next course a more substantive participant list will be produced with a few details of the final course assignment resources as well as names and addresses. This could be a useful reference and tool for networking for participants and a good record of resources produced. It is recommended that participants are requested to hand in an extra copy of their assignment/resource so that this can be kept as a course record and be available to others.

EQUIPPING OURSELVES WITH TOOLS FOR THE JOB: DEVELOPING RESOURCES

Resources play a vital role in supporting professional development. Participants have commented on three main aspects of professional development related to resources: the value of becoming aware of what resources are available, being involved in a resource development process, and the recognition of people, others and themselves, as resources.

The course file consists of four themes with core texts and selected readings. A

number of participants have mentioned how useful this file is as a resource for drawing on both during and after the course has been completed. The file has been called both a *"treasure"* and an *"EE Bible"*!

A key aspect of professional development is becoming aware of the resources that are available to support environmental education processes. Several participants, for example, noted that the Gold Fields course was their first introduction to the Share-Net resources. The Share-Net resources range from *Hands-On* field guides to ecosystems, *Beginners' Guides* to species, an action series, handbooks for teachers to water testing kits. A significant number of participants have commented on how useful it has been to discover these tools for better practice.

It is not only the resources themselves, but the actual concept of Share-Net that seems useful to participants. The idea that a participant can become part of a network of people producing resources to share with others (the resources are sold on a cost-recovery basis, there is no profit involved in the development or production process) is an empowering one.

Share-Net can be described as a loose collaboration of individuals and organisations working together to contribute to and benefit from low-cost environmental education resources.

Share-Net has played a significant role in the development of environmental education in South Africa. It has become a pattern for one of the national workshops of each Gold Fields course to take place at the Wildlife & Environment Society's Umgeni Valley Project. This is the home base of Share-Net and participants usually regard the visit as a significant feature of the course.

Paula Morrison valued the experience of learning how to *"access things"*. She commented on the sense of confidence and independence she has noticed in her staff who participated in the Natal Parks Board course and who now often access Share-Net resources themselves rather than depend on Paula for materials as they did previously.

The process of developing a resource can be a very valuable learning experience. For the final assignment of the course, participants are required to develop a resource or programme that will be useful in their work situation. This is often the first time that a participant has considered resource development or even entertained the idea that s/he is capable of producing a resource. This assignment is therefore usually an instance of capacity building among participants. This was the case for Kate Davies who had never before developed a resource. She developed a small booklet entitled *A Year of Special Days - 1997* which contains a calendar and information on environmental days. The booklet has been published though Share-Net and has been widely used by teachers and journalists for planning lessons and articles around special days such as Arbor Day or Human Rights Day. This is an example of the development of competency in an individual, who then contributes to the wider environmental education community through the development of a useful resource.

Owing to its popularity the booklet has been updated for 1998 and again for 1999.

Other participants have produced planning documents. In 1995 Paula Morrison drew up a concept plan for an environmental education centre in the Hluhluwe-Umfolozi Park as an assignment. She still refers to it quite often in her present work. Mduduzi Mchuno's early plans for the Natal Parks Board's Ndumo centre is

a further example of a course assignment as was Mike Ward's course programme for the Drakensberg Wetland Project. Mike submitted his programme as an illustrated document which has subsequently been used by his colleagues for developing future course programmes. Cliff Maunze who worked with teachers and pupils in the Karoi region in Zimbabwe, adapted Namibian and South African environmental clubs' materials to develop a set of guidelines for Zimbabwean clubs. The reader is referred to Part VI of the main evaluation report for a selection of resources and programmes produced by Gold Fields participants for their final assignments. This selection gives a sense of the exciting and broad scope of work in which participants are involved and is also an illustration of tangible course products which have been applied far beyond the course itself. The resources produced are becoming increasingly impressive in quality, range and usefulness.

Although this tangible collection of resources is a reflection of the rich course activities, it still fails to illustrate the "intangible human shaping processes" (Taylor, 1997, 173) involved in their production. The experience of working on a resource, usually with others (the process), can even be more valuable than the resource itself (the product). These processes are opportunities for growth. We can display a collection of resources or products, in an attempt to capture the processes into something tangible, but the dilemma remains of how to share the depth and richness of the processes of these products. In this report, for example, it is difficult to do this. There seems to be so much left out in, for example, displaying a collection of assignments produced by participants in one part of the main evaluation report.

Intangible human shaping processes: Taylor uses this phrase to describe the human involvement and commitments which cannot always be foreseen when planning a project and may be difficult to articulate but which have underpinned much of the work in the Share-Net project. This seems a useful phrase too for the experiences within the Gold Fields course many of which arise almost unbidden from the opportunities the course enables rather than being explicitly planned for.

How do we value processes when we live in a product-oriented world?

Some of the value of processes of learning is illustrated in participants' comments on how they begin to see themselves and each other as resources. Having been a participant on the Gold Fields course in 1996, I often find myself drawing on fellow participants as resources, either by calling someone with a request for a contact or other information, or referring someone else to a fellow participant with particular expertise or who lives in a specific area. This is really a process of networking with each other as resources. Mvusy Nangu also felt herself becoming a resource for others: "*I feel I get recognition as a resource person in terms of EE as I also inform decision makers/bosses on policy issues in terms of EE*" . Tembeka Dambuza, then from the Centre for the Advancement of Science & Mathematics Education (CASME), also mentioned the "*human resource*" which has been so useful to her because where she worked she was the only person doing what she did, and she valued being able to turn to course participants for feedback on the concepts in the curricula she develops. Perhaps Tembeka sums up this point best:

> *"I began the year with a group of strangers and ended up with a group of resources".*

TAKING THINGS FURTHER AS A TUTOR

It is interesting to note that tutors frequently offer their services to the course, free of charge, year after year. The following comments made by tutors in interviews and focus group discussions suggest that the course offers sought-after opportunities for professional development to tutors in particular, and that many participants are prepared to be tutors because of a desire to extend their experience of the course as students. Alison Kelly, Western Cape tutor, explained that as a tutor, she did not feel like she stopped being a student. Shirley Edwards, Gauteng tutor, also thought that being a tutor was "*more like a continuation*". Shirley added that "*when [she] finished the course last year [she] felt [she] hadn't had enough time*"; she had only started "*getting to grips with all the new stuff*" by the time course ended and she wanted a chance to grapple further with issues and to develop a deeper understanding. Shirley said she felt "*stretched*" as a student, but as a tutor this year has "*come closer to answering many of the questions from last year and [has] come to understand more of the issues that were so new and unfamiliar last year*". Natasha Stretton, also a Gauteng tutor claims to have learnt as much as a tutor as she learnt when she was a student three years previously. What was important for Natasha was that there was not an expectation that the tutor would be an expert who will provide the information; "*instead we learn and grapple with issues together*".

The term 'tutoring' is used for a specific function in this course which may differ from how it is used elsewhere, for example, in a university context where tutors explain text and lecture content

Kathy Stiles, course co-ordinator in Zimbabwe, commented that tutors in particular seem to get a lot out of the course, and that they are "*students who want to take the course a step further*". This seemed to be the case with Mike Ward, tutor for KwaZulu-Natal, who felt he finished the course as a student with a 'scaffolding' of ideas; taking things further as a tutor meant more contact with the text and with other people and was leading to the point where "*I can climb on some of those ideas and build more of my own ideas on top of them*".

Tutors seem to find the course particularly challenging and this is likely to lead to greater learning. According to Alison Kelly, it was a lot less demanding being a student than a tutor: "*I'm finding you can't be a tutor without giving it your all*". Linda Paxton, the 1995-96 course co-ordinator, said the success of the course depended on the tutors. This was echoed by Heila Lotz, the 1997-98 co-ordinator, who noted that the responsibility for making the course work lies with the tutor. According to Heila, it is the student's responsibility to finish the course and obviously a student will only benefit from what s/he puts into the course, but it is the tutor's responsibility to make the course *work*; this means having to be "*more rigorous, more clear, put more intellectual effort into the course materials*".

Ingrid Schudel was, in a sense, a double participant: she was both a student on the course and a tutor. Sometimes tutors are actually 'stutors', both students and tutors Ingrid felt that her joint student-tutor role meant a special opportunity for development. It was easier as a student to sit back and Ingrid valued the opportunity that being a tutor provided of being forced to participate more. Also, being a tutor meant spending more time on the course; it is an opportunity to work through things a second time and usually involves being challenged to really work through issues. For Ingrid too

What does this mean for students? Is it important to create more responsibilities for students if these are opportunities for professional development?

the increased participation led to the development of more self-confidence. When I asked about the workload, Ingrid smiled saying "*double the work but double the benefit!*".

A few tutors have mentioned the value of developing organisational skills. Mike Ward, 1997 KwaZulu-Natal tutor, mentioned the "*funny little benefits...like getting a file together, keeping tabs, working with people to make sure we all land up in the same place at the same time*". Leon Barkhuizen, Free State tutor, pointed out that he has had to become more organised; he also added patience as a newly developing skill! Paula Morrison discovered that she learned a lot 'administratively' when she was a tutor for the NPB course: "*about how to manage a course, how to bring people together, and there is this constant thing of checking*".

Increasing the tutors' responsibilities by, for example, them having to "*constantly check*" on students, may be at odds with the course's orientation which stresses the importance of students taking responsibility for their learning. Sharing the organisational responsibilities of the tutor amongst participants could be a way of both lightening the tutor's load as well as creating opportunities for participants to develop professional skills - this seemed to work well for the Western Cape group in 1997/8. Their tutor divided responsibilities for organising tutorial weekends leaving this almost solely to participants who claimed that they learned a lot and even enjoyed being asked to do things.

'Sciencing with Watersheds, Environmental Education & Partnerships' (SWEEP) is a professional development programme to enhance science education in Ohio, USA. Teachers are paired with science professionals in long-term partnerships. Each partnership reconceptualises its school curriculum around an integrated watershed theme and develops an action plan. The authors report that teachers developed more confidence and both teachers and students were more enthusiastic about science education. What is particularly interesting in the light of the experience of the Gold Fields course tutors, is that the resource professionals also reported significant professional development. They reported enhanced job-related skills, more leadership and flexibility, improved communication and problem-solving (Bainer & Cantrell, 1997). Like Gold Fields course tutors, they seemed to benefit from useful partnerships with other learners engaging around particular projects.

A BRIEF NOTE ON ACCREDITATION & CERTIFICATION

The issue of formal accreditation of the course is a contentious one that obviously has some bearing on professional development. Many participants felt strongly about the need to receive recognition from their organisations for the professional development associated with participation in the Gold Fields course. Formal qualifications are often the key to promotion. These concerns led to accreditation in the form of a certificate from Rhodes University from 1996 onwards. The issue

remains unresolved, however, and the way in which the course will slot into the new National Qualifications Framework in South Africa is currently being investigated. (The reader is referred to a Kenton Conference (1997) paper by Janse van Rensburg, E. & Lotz, H. *Assessment & Accreditation of Adult Learning in Environmental Education: Negotiating a Gap in a Framework of Competence*) For a more detailed discussion on accreditation of the course see Part III of the main evaluation report.

DRAWING THREADS TOGETHER: SOME CONCLUSIONS

The aim of the research for this report was to evaluate, describe and comment on the role of the Gold Fields course in professional development. The report so far seems to provide ample illustration from participants that the course has contributed significantly to their professional development in environmental education. The course has contributed to participants having a much broader view of the concept of 'environment' and of environmental education. They commented on changed approaches to environmental education and on the development of skills in writing, presentation and organisation. An increase in confidence as an environmental educator seemed very significant, and participants also mentioned the value of purposeful networking and resource discovery and development as key features of professional development.

The research was, however, also intended to challenge and disrupt current understandings of/in the course to contribute to its improvement and further development. In this next section I attempt to explore the concept of professional development further most especially in the light of the course orientation. Critical reflection and praxis are important elements of this orientation. If we reflect critically on our actions we develop a better understanding and may be able to improve our work in environmental education (Course Orientation Notes, 1997)

There is no doubt from the overwhelmingly positive feedback in this report from participants that the Gold Fields course has enabled them to do their work better. What is not so clear, however, is to what extent this professional development is linked to the critical orientation of the course.

In the next section I will take a slightly deeper look at the concept of professional development by drawing on some of the literature in this field and linking this to the reflections of course participants' experiences. I will also explore the critical course orientation and the concept of praxis, as well as the ways in which the course offers opportunities for professional development through these processes.

EXPLORING & CLARIFYING PROFESSIONAL DEVELOPMENT: THREE POSSIBLE ORIENTATIONS

The clarification of professional development can be informed by considering the different orientations to education proposed by Kemmis, Cole & Suggett, and recounted by Fien (1993) - vocational/neo-classical, liberal/progressive and socially critical orientations. From each of these perspectives on education, professional development as a type of education, takes on a different character. While the aspects which relate to the vocational/neo-classical and liberal/progressive orientations may be valid and useful perspectives on professional development, the orientation of the Gold Fields course draws more strongly, if not exclusively, on the orientations within the socially critical framework. This orientation includes a praxis-related perspective of professional development and involves a realisation that knowledge is socially constructed, taking into account the historical and sociological context, the development of political awareness, and the notion of theory-in-action (Fien, 1993).

A **vocational/neo-classical orientation** to professional development makes no clear distinction between education and training, and highlights the importance of providing learners with skills required to fulfil their work roles better (Fien, 1993). Within this framework, existing social structures are accepted uncritically, and the pedagogical aim is to teach skills so that learners will fit into these existing structures. A number of Gold Fields course participants mentioned developing useful skills for work activities such as writing, running workshops, new teaching strategies, organisational skills (refer to section **Becoming Better Equipped with Improved Job Skills** earlier). Some participants who associate professional development and education with the acquisition of skills expressed disappointment in the Gold Fields course. They would have liked to acquire more skills, and sometimes compared their situations with better-resourced projects with which they became acquainted through the course, claiming that they could not "do" environmental education because they did not have the right (or enough) equipment compared to other environmental education projects. These participants were also inclined to think that there were universal techniques of environmental education that could be learnt and applied to all situations, and were somewhat disappointed not to acquire these techniques through the course.

A further illustration of professional development of the vocational/neoclassical kind follows. While a broader understanding of the environment and environmental education (mentioned by many as a significant feature of participation in the course) may lead to better practice, it does not necessarily imply depth of understanding. Similarly changes in approaches do not necessarily mean changes in pedagogical concepts, as a careful look at the discourse of some comments revealed (refer to the section on **Joining the Tbilisi Team**). Some participants talked of *"receiving"* or *"attaining"* different approaches to teaching from the course and claimed to have changed from their previous approaches simply because they were *"not correct"* - there was no indication of an attempt to explore what was *"not correct"* or why. In some cases it seems that there is simply the replacement of one set of techniques with another in an attempt to be more 'professionally correct', or an attempt to try

out approaches that seemed to have worked well in the course without really engaging with why these approaches may be useful.

A **liberal/progressive orientation** to professional development advocates a broad general education to prepare learners for life rather than specifically work and there are indications of professional development of this nature from participation in the Gold Fields course too. Professional development from this orientation seeks to develop and improve society through the education of autonomous individuals who are able to fulfil various life roles adequately. The underlying philosophy emphasises practical, social and expressive knowledge, favouring personal and social development programmes, and links professional development to personal growth (Fien, 1993). Many of the Gold Fields course participants used the two terms, professional development and personal growth, almost interchangeably. Comments such as "*I became a brand new person*" clearly link personal and professional development, as do frequent references to increased confidence developing from participation in the course. One participant commented that she had "*grown from the inside*". Not all confidence, however, is well-founded or deeply rooted in sound educational practice. This point was raised in the discussion on increased confidence particularly with reference to a superficial engagement with well-known environmental education principles such as the Tbilisi principles (see *Joining the Tbilisi Team* earlier).

A **socially critical orientation** to professional development values the personal development objectives of the liberal/progressive orientation, but "believes that they are insufficient educational goals in a world that is structurally unequal in terms of class, gender and race relations" (Fien, 1993, p22). Professional development from this orientation aims to promote social justice and equality through learners critically examining social problems and actively participating in improving society. We can locate some of the thinking in the written Gold Fields course orientation in this framework. Critical reflection and the notion of praxis are among the basic ideas which underpin the Gold Fields course. Reflecting critically on our work by means of a critique of the historical trends and patterns in environmental education may enable us to improve the way we understand and do things. The course is also based on the idea that theory and practice are not opposites, but inseparably interwoven. The course is about exploring our own theories and coming to think more clearly about what we do, so that we can do our jobs better (Course Orientation Notes, 1997).

Fien & Rawling (1996) have written on the value of "reflective practice" for professional development in environmental education and claim that reflective practice experiences are essential when one adopts a critical approach to midcareer professional development in environmental education.

> "Reflective practitioners realise that their identity is defined by educational, social, and political factors and that there is opportunity for change and improvement in themselves, their work environments, and society. They do not accept the everyday reality of their work as the only alternative and have the courage and desire to recognise and experiment with alternatives. They are able to use critical reflection to

> break out of the mechanical routine of making decisions based on intuition, impulse, tradition, and authority" (p14).

The critical orientation of the Gold Fields course encourages the professional development of 'reflective practitioners' that will be empowered to 'break out' of accepted routines that are unproductive, through critical reflection, and motivate for social change.

In what can be regarded as an enlightening critique of a vocational/neo-classical orientation to professional development and a move towards a socially critical orientation, Robottom (1987) advocates a shift from a paradigm of 'information technology' to a paradigm of 'information critique'. He claims that in the information age in which we now live, it is important to adopt "the approach of enquiring critically into the environmental, educational and social values" (291) which inform actions, rather than simply adopting and retaining information. The 'information technology' paradigm is based on a 'Research, Development, Diffusion, Adoption' (RDDA) approach to professional development which shares underlying assumptions with a vocational/neo-classical orientation to education. From this perspective theory is also seen as separate from practice, and the domain of the researcher, with practice the domain of the teacher or practitioner. In contrast, the 'information critique" paradigm challenges the RDDA perspective and encourages practitioners to reflect on, or research, their own practice.

Some participants did show an appreciation for the idea that thinking and doing are inextricably linked, and for the value of being mindful about what we do: one participant claimed that she found it very useful "*the thinking, thinking about things for the first time, instead of just doing them*". There are other comments which seem to indicate that participants have grappled with the socially critical orientation of the course. A number of participants used the term "*grapple*" when discussing the course, which is in itself an indication of a critical reflective engagement with the issue. Other comments which further illustrate this critical engagement follow:

> *"the course has given me an introduction to the theoretical and ideological aspects of EE...(and) has led to a more critical approach in my work".*
> *"the course itself has enabled me to look at my work more carefully, doing assignments has encouraged me to begin thinking and writing about my own work"*
> *"sharing ideas on teaching and learning and reforming my own ideas in practice"*
> *"it provides you with the opportunity to look at your own work and practice and to use the ideas that others have exchanged with you to improve what you are doing"*
> *"issues and ideas grappled with during the course impact upon and improve our practice"*
> *"it encourages reflection of your practice - taking stock of where you have come from and where you want to go"*

But these kinds of comments were not encountered as frequently as ones referring to 'performance' skills or building of confidence.

As a course participant in 1996 (and an avid fan of the course!) I feel that my professional development was largely a result of meeting and working with a wide range of participants which led to a better understanding of the broad scope of environmental education as well as improved networking. I met some great people and enjoyed the course enormously but I wonder to what extent I really grappled critically with and reflected on the work that I do. I think that many participants did develop professionally through critical engagement within the course (as the comments above indicate); there are many others, however, who, like me in my first experience of the course, simply benefited enormously from meeting others in the field, developing resources and networking. It is only now that I am working on this evaluation report as well as being a tutor on the course and am forced to grapple with issues that students are struggling with to write their assignments that I am developing a sense of a deeper and more critical engagement with the course.

Participants' views reflect features of all three orientations to professional development (vocational-neoclassical, liberal-humanist and socially critical). Comments related to competence and confidence-based professional development indicate that the course successfully involved education with a vocational and a liberal orientation; there seems more limited engagement, however, with professional development from a critical perspective. For a socially critical orientation to professional development we need to see the course as an opportunity for praxis.

PRAXIS AS A CONCEPTUAL LENS

The orientating framework of the Gold Fields course (Course Orientation Notes, 1997) includes the notion of praxis, and the idea of praxis provides a useful conceptual lens for looking back on the data presented above as the various aspects of professional development arising from participation in the course. The Gold Fields course is an opportunity for professional development through praxis.

Praxis implies a conscious recognition of the relationship that exists amidst theory in practice. It can be described as mindful practice from within a critical orientation and as an exploration of the 'why' question that lies within the 'what' and the 'how' of our work; it involves asking why we do things the way we do. This questioning feeds back into our practice. Usher *et al* (1997) suggest that all practice needs to become praxis which they describe as "a form of practice which is both reflective and reflexive" (137). They explain that for reflexivity theory and practice need to be mutually interactive and recognised as such: "here, informal theory, by being brought to consciousness, becomes open to change in the light of practice, which itself changes with changes in informal theory" (137). The idea of praxis is informed by critical theory's concern with ideology and the way in which our actions are unconsciously shaped by social systems. Usually we are unaware of these systems but when we become conscious of their existence we can be empowered to act for change (Fien 1993).

Praxis, therefore, implies far more than linking theory to practice, and is more than simply applying the course to one's work. Praxis is about better thinking and doing and the ideas of critique and conscientisation are pivotal. Praxis also entails a better understanding of the thinking in doing. It involves striving to theorise what we are doing (asking 'why' about 'what' and 'how'), and also improving theories through reflection on action. Glenda Louw explained the value of the course for her in this way: "One sometimes gets caught up in the 'what' of your job and you fail to consider the 'why' and consequently 'how' of what you are doing. The course has, by relating the theory to the job you are doing in a sense 'forced' me to reflect on the approaches we use in what we are doing. And consequently seek to do it differently".

Mike Ward described his experience on the Gold Fields course as professional development through a process of **"informed critical action"** which is, I feel, also a useful way of understanding the concept of praxis:

> "*I was working as an education officer at the Drakensberg Wetland Project. I used to take groups of kids out to do water studies or interpretive trails (**action**) and until the Gold Fields course I didn't really think about why I was doing things the way I did. I started to be **critical** of the way I worked. It was more than just questioning however as the course, through materials and tutorials, offered the opportunity to be critical from an **informed** position*".

Praxis provides a useful conceptual framework for and theoretical description of professional development. Many aspects of professional development in the broader sense, however, would not necessarily be described as praxis. A course participant may feel more confidence as an environmental educator and have improved writing and computer skills but this could be one form of development with no grappling with the theories that inform environmental education practice. The boundaries between what may be a vocational/neo-classical skills-based aspect of professional development, such as more competence with a computer, and the confidence in a liberal/humanist orientation that may accompany this competence, and the deeper, more critical, praxiological engagement, are however not necessarily distinct. If people start to feel competent with writing and with using a computer, this could lead to a realisation that they are capable of producing their own resources, which could challenge a preconceived belief that it is only 'experts' who can produce resources. Taking this further, a person may then begin to consider *why* it is that we tend to believe that it is only experts who can produce resources, thereby becoming conscious of an underlying ideology, and through the empowering experience of having developed her/his own resource, feel in a position to challenge this. This then will be education with a socially critical/emancipatory orientation and is an example of professional development through praxis.

Usher *et al* (1997) refer to a trend in professional development towards improved performance in the workplace which is gaining momentum in adult learning courses. They refer to this as 'performativity' (14), or the idea that one of the purposes of knowledge is to optimise efficient performance. Taylor in Lotz (forthcoming) has commented that concepts like performativity which emphasise efficient performance tend to dehumanise educational processes. This could be true in a course which

teaches skills as definitive universal steps with checklists to be completed. I would argue that this is different in the context of the Gold Fields course however. Participants reflect their experiences of learning to improve job skills such as writing and presentation (what could be referred to as improved performativity) as a result of working together in meaningful human relationships with other course participants.

It is important to be critical of this trend in adult learning courses towards improved performance if we are to respond to the contextuality and complexity of environmental issues and the diverse nature of environmental education processes. Robottom & Lotz (1998) highlight the need to challenge narrow technicist interpretations of workplace-based education and training. In the Gold Fields course we need to guard against an emphasis solely on 'performativity', or the ability to do the job better, without questioning what and why we are doing. I feel that a focus on praxis in a course is more useful than one on performativity.

I feel that praxis is a useful conceptual lens for professional development and that it would be worthwhile to explore ways in which the Gold Fields course provides opportunities for praxis, as well as ways in which to strengthen these aspects.

HOW CAN A COURSE BE AN OPPORTUNITY FOR PRAXIS?

Praxis is a core organising idea in critical pedagogy and in the work of Paulo Freire, according to whom education should be 'liberating' with teachers and students engaging together as active participants in the construction of knowledge. In her investigation of what it means to regard curriculum as a form of praxis, Grundy (1987) looks at some of the constitutive elements of praxis as they emerged from Freire's work and considers the meaning these elements have when they are applied specifically to curricula. In order to illuminate the critical and praxiological orientation of the Gold Fields course to highlight these aspects as valuable learning opportunities, I will examine features of the course in the light of, amongst others, Robottom's (1987) suggested guiding principles for professional development and Grundy's analysis of curriculum as praxis.

Robottom suggests a number of guiding principles for professional development within a paradigm of 'information critique' (discussed above): professional development programmes should be enquiry-based, participatory and practice-based, critical, community-based and collaborative. I have expanded these principles into ideas for opportunities for professional development that a course might enable (refer to the table that follows).

Guiding Principles for Professional Development in Environmental Education

Professional development in environmental education should be:	A course which enables opportunities for professional development would therefore have to encourage participants to:
1. Enquiry-based	Adopt a research stance to their own EE practices
2. Practice-based	Draw on their own practices in their participation in the course
3. Critical	Question values and assumptions that inform environmental activities and policies
4.Community-based	Work within contexts specific to their environmental and educational situations
5. Collaborative	Work with others because: - several heads are better than one and can see from various perspectives - to take action, a group is more effective

I feel that the Gold Fields course is organised largely according to these principles and that they explain to some extent its valuable contribution to the professional development of its participants.

CURRICULUM AS PRAXIS

For a course curriculum to be an opportunity for praxis it is worth considering the following key aspects, some of which are key elements of the Gold Fields course.

INTERACTION AND PLANNING BY PARTICIPANTS

The constitutive elements of praxis, as they emerged from Freire's work, are action and reflection, and a praxiological curriculum, according to Grundy (1987), "is not simply a set of plans to be implemented, but rather is constituted through an active process in which planning, acting and evaluating are all reciprocally related and integrated into the process." (115). Participants of the Gold Fields course are provided with a file containing core texts and readings. This file only constitutes a very small part of the course as can be seen from discussions, for example, "intangible human shaping processes" (see side text in *Equipping Ourselves...* section) because the course is what develops in the interaction and planning, or action, that happens between participants when they meet at regional tutorials and national workshops.

NEGOTIATING THE CURRICULUM

A curriculum that is negotiated amongst participants provides an opportunity for a course to be directly relevant to its participants. This does not imply, however, that there is no need for preparation or structure. A course outline and a clear basis from which to plan and develop the course further are essential.

Zeichner and Liston (1987) have contrasted the idea of a 'received curriculum' where students passively receive a programme specified in advance and taught by experts with that of a 'reflexive curriculum' which reflects a view of knowledge as socially constructed (not certain or unchanging) and provides for teachers and learners to negotiate content.

Gold Fields course participants need to construct their own theories of knowledge, a process valued by, amongst others, Debbie Hall who found the course very different to what she expected: "*a distance learning experience, working in isolation with brief periods of interaction with like-minded individuals to discuss course work. Instead I found myself in the middle of a dynamic group of people from different socio-political backgrounds and work experiences who were working together to improve our own, and joint understanding of what environmental education is all about. Instead of being taught about EE and how to do it, we were creating our own understanding of EE and how we can best apply it to our own circumstances*".

LEARNING IN THE 'REAL WORLD' AND LINKS WITH WORK

Another constitutive element of praxis, according to Grundy (1987), is that learning takes place in the real, not the hypothetical world. In her article "Learning in practice: support for professional development" Leach (1996) also stresses the importance "for real professional growth [of] a direct relationship between education and practice itself" (101). Usher *et al* (1997) in their recent study of the field of adult education note the importance of seeing educational forms contextually.

The requirements of Gold Fields course assignments illustrate that this principle underlies the course orientation. Course assignments are designed to support participants in doing their jobs better - links between participants' work and the course are constantly encouraged. In the Gold Fields course a participant's work in the 'real world' forms the source of learning. Also, because assignments have their origins in a perceived need in a participant's work situation, when completed they are used 'for real'. A good example of this is Paula Morrison's planning document for the Natal Parks Board's Ndumo Environmental Education Centre which she submitted as an assignment for a Gold Fields course in 1994, and which she still refers to today in her work (as discussed earlier).

LENGTH OF COURSE

The length of the course is an important dimension for enabling praxis. In a part-distance course for working professionals such as the Gold Fields course, a year seems the minimum period for really reflecting on the work that we do, and to enable sustained supportive relationships to develop.

TUTORIALS AND WORKSHOPS

Regional tutorials and national workshops when participants get together are fora for the "negotiation of shared meaning" (Leach, 1996, 105). Knowledge is developed in contexts of shared learning such as these and it is in dialogue that knowledge is continually constructed and also transformed (Leach).

It seems that the supportive environment of regional tutorials plays a vital role in encouraging development through praxis: Rosie Campbell highlighted the value of the "*amazing supportive environment*" of the regional tutorials which enabled the development of *"close personal relationships allowing personal, social and professional development"*. She described the tutorials as a "*safe environment to test yourself, push yourself, ask difficult questions, have difficult discussions*". This testing and discussing contributes to professional development through praxis. For some, like Jimmy Belelie, tutorials offered the space to disagree which contributed to understanding and growth. Their numerous enthusiastic comments are evidence that participants seem to treasure time spent together at tutorials and workshops.

ROLE OF ASSIGNMENTS

One can look at professional as *"being able to profess"* (pers comm Rob O'Donoghue, Pietermaritzburg, April 1998). This understanding of 'professional' would require participants to be able to express their understanding through writing or talking. Perhaps professional development is a mixture of doing, understanding (exploring what 'stands under' what we do) and expressing or articulating this.

Course assignments play a valuable role as an opportunity for professional development of this nature and in a curriculum as praxis. They encourage participants to reflect, in writing, on their action or practice. Participants need to be critical of the work they do, drawing on course readings and fellow participants to be able to write from an informed position.

In the Gold Fields course assignment writing is viewed as an opportunity, and a process of personal development, in this instance used almost synonymously with professional growth (Course Orientation Notes, 1997). Assignments are designed to support participants in doing their jobs better - it is essential for participants to draw on and make links with their work. For some participants writing the course assignments seemed to contribute to praxiological development. Leon Barkhuizen commented that "*[the assignments] helped me to critically discuss and investigate the work I'm doing ... really made me think*". The ability to complete the assignments in a way which shows personal and professional development and growth is taken as evidence of developing a critical understanding through the course.

Truus Hedding described the assignments as the most worthwhile part of the course: "*the four assignments allow for a thought process to develop that gives you a critical view on EE and particularly the work you are doing*". Assignments are not given a quantitative mark and participants have to hand in several drafts negotiating with their tutors until both are satisfied with the reworked version. Truus valued this rewriting process as it "*allows for 'deeper' thoughts ... sometimes I would hand in something I wasn't quite happy with but could work it out later after time and talk*". Another participant, Ingrid Schudel, commented on the value of the assignments for "*the clarification of my own work and the challenge of locating that work in the context of the course materials*". Glenda Louw valued the assignments for the opportunities they afforded for reflecting on practice, as well as the workshops and tutorials for the support they provided for this reflection.

It would be useful to look more closely at participants' writing for further evaluation of the course. Professional growth could be explored by 'tracking' participants' writing in assignments. For this purpose at the end of the 1997/8 Gold Fields course tutors copied all four assignments of three of their students. This assessment should contribute significantly to evaluation of the course in terms of professional development. We also need to explore ways to support participants with assignment writing. This will largely depend on tutor support being available to students as they grapple with issues in assignments.

CONCLUSION

> *"I think that completing this certificate course means more to me than any other work I have done - I may not have gained as much information as in previous studies, but I have learned some really important and relevant skills that I believe will enable me to contribute to 'the cause' in a tangible way. Mostly I have learned about myself and what I think".*

The Gold Fields course is indeed making significant contributions to professional development of environmental educators and to environmental education as a whole in southern Africa. It does so by supporting various aspects of professional development, some of which can be interpreted as praxiological. Whereas the boundaries between vocational, liberal and critical frameworks are somewhat blurred, in the future development of the course it would be important to consider ways in which to strengthen praxis, or critical mindful action, amongst environmental educators, for professional development that can contribute to processes of change in a community of colleagues.

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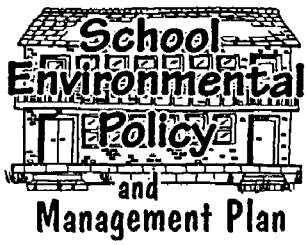
4. RESEARCH PAPER

Getting Environmentally Organised with a School Environmental Policy Initiative

January 1999



Getting environmentally organised with a School Environmental Policy Initiative

January 1999

Kim le Roux
Wildlife & Environment Society of South Africa
e-mail: kim@futurenet.co.za Tel: (0332) 303 931

Abstract
Following a brief outline of resource and curriculum development processes and the new Outcomes Based Education context in South Africa, this paper reports on a school environmental policy initiative as a framework for organising existing resource materials and environmental education processes in schools. The policy initiative has recently been used within a few in-service courses for teachers. Drawing on research with teachers on one such course, this paper uses their reflections as well as a review of the literature to explore several possible implications of school environmental policies. Data was collected through participant observation in the course, informal interviews with individual course participants and analysis of assignments. On the basis of this exploration I propose a number of implications of school environmental policies including their potential to provide possible frameworks for curriculum development, to help organise environmental education activities, to enable co-operative policy development (the school within a community), to help manage a school's resources wisely, and to make specific plans for action.

Context
Schooling in South Africa is set to undergo radical changes with the implementation of outcomes-based education (OBE). This signals an end to the education system of the past and introduces a new framework for learning - one which offers many opportunities for including environmental education processes within formal school curricula.

The Wildlife & Environment Society of South Africa (WESSA), the non-governmental organisation for which I work, supports teachers with the production of low-cost environmental education resources (Share-Net) and with workshops and courses. One such course which I helped to co-ordinate was an environmental education module of a Bachelor of Education (B.Ed) course for practising teachers at the University of Natal, Pietermaritzburg (August -November 1997 & 1998).

The research dimension of the B.Ed module was part of a curriculum development initiative of the Human Sciences Research Council (HSRC) in partnership with the Environmental Education Curriculum Initiative (EECI)[1]. The aim of the HSRC project was to promote collaborative research by supporting mini-projects that addressed topics including the development of environmental education curricula and programmes and materials

[1] The Environmental Education Curriculum Initiative (EECI), an affiliation of teachers and educators, both from governmental departments and NGOs, emphasises the importance of considering environmental education curriculum processes in formal education and aims to support the development of these processes.

development processes for environmental education (HSRC Research agreement, July 1997). The focus of our B.Ed research project was to evaluate existing Share-Net resource materials with practising teachers during an INSET course with the aim of supporting curriculum development by teachers in the context of OBE (see WESSA HSRC research reports March, July & November 1998). The research methodology included observation of sessions, discussions with participants, analysis of assignments and questionnaires to evaluate the course. In this way I have been able to share and record over a period of ten weeks the participating teachers' reflections on their initial engagements with school policy processes using a Share-Net resource pack. The relatively short duration and introductory nature of the course meant that this paper can only report some initial impressions and insights, as a way of documenting the value of the early experience of policy initiatives and the pack, and opening up issues for further exploration.

In research on the development of environmental education resource materials, O'Donoghue (1990) advocated a move from "the external management of pre-tested, objective-centred packages developed by a project team to a resource pool and a networking support service for teachers to adapt and develop resources to local needs" (102). The Share-Net project has effectively developed into a networking support service with a pool of resource materials for environmental education (see Taylor, 1997, for the story of Share-Net). Over the last few years and especially with the introduction of Outcomes Based Education (OBE) in South Africa, what has seemed to be lacking within this networked growing pool of resources is a framework for taking up resources and for planning environmental education processes in schools. This paper documents the main finding of our research: that the school policy process and resource materials can help teachers to not only frame their use of a range of resource materials more coherently, but can also give greater coherence to environmental education activities in schools.

School Environmental Policies

Experiences in countries such as Australia (Victorian Principals, 1997; Gough, 1992) and the United Kingdom (Baczala, 1994) indicated that there could be merit in investigating the idea of school-based environmental policy initiatives. School environmental policies have developed as open frameworks for stating intentions and principles and managing action plans for improving schools' environmental performances. The policy development process has an open structure and encourages schools to audit existing activities and to set, evaluate and review environmental education goals and actions for many key curriculum activities. Auditing is a key part of the policy process and involves careful looking at the way things are and how they can be improved (Share-Net School Policy Resource Pack). Different aspects of environmental practice at schools are open to scrutiny and auditing. These are not limited to the resources a school uses but can include aspects such as the special environmental days in a school calendar and use of local or community knowledge in learning programmes.

School Environmental Policy Initiatives in Courses with Teachers

The need for a framework for environmental education processes and resources noted previously was also evident in the environmental education module of the 1997 B.Ed course mentioned above. As co-ordinators of the course, Jim Taylor and I were disappointed when participating teachers seemed to simply want to pass the course without really engaging with the resource materials they were given and did not seem very interested in adapting or developing the resources further.

During the next year in a second B.Ed course we used a resource pack for school environmental policies developed through Share-Net (March 1998) to provide a framework within which teachers could take up resources and plan for environmental education processes in their schools. Thus in the second course, instead of simply doing an 'isolated' field trip using field guides for grassland or soil studies, for example, we introduced the field guides in relation to the fieldwork component of a school's policy. To support development of other aspects of a school policy we introduced resources such as water testing kits to audit the resources a school uses and calendars to plan activities around environmental days. The policy process emerged through the research as a useful framework.

The policy initiative seemed to give coherence to our 1998 B.Ed course as well as to activities at the participating teachers' schools. Barbara Dlamini, a course participant, commented that the resource pack participants were given "gave us a way or direction on how to go about the course, with our activities at school". In her presentation to the class at the end of the course, Ntombifuthi Mshengu explained that "the policy helped to link what we are doing on the course to what we should be doing at school".

The Development of the School Environmental Policy Resource Pack

Within the context described above and as a result of experiences in workshops and courses with teachers using resource materials, a group of environmental educators (including Rob O'Donoghue, Heila Lotz, Kevin Burge and myself) compiled a resource pack to guide and support the development and implementation of school environmental policies (Share-Net, March 1998). This pack was widely used in 1998 to support environmental education processes in South African schools with over 4000 packs being bought by teachers or used in courses and workshops. The policy pack has also been used to support other courses for teachers, for example, the Gold Fields Teachers' course in Gauteng (Molose, Ramsarup & Lotz, 1997/8) and the Natal College of Education in-service (INSET) distance education course for teachers (Pennefather and Newton, 1998).

The policy pack contains loose pages each representing an aspect of a school, for example, the school calendar, resources used in the school, and fieldwork activities. These elements can be audited and incorporated into a school environmental policy. A format of loose pages in a folder (see figure 1) was selected rather than a booklet so that teachers could choose and use whatever is relevant to their particular situation. One side of the page provides information on this aspect and suggests useful resource material that could support further investigation as well as making a few links to specific outcomes in the new curriculum. The other side of the page is largely blank with space for filling in policy plans. There is also a selection of appendices to support the various pages. These appendices include, for example, a year planner with environmental days and a booklet with suggestions for celebrating these days.

Looking at the policy pack and the framework it offers for resource materials and environmental education processes it would be easy to assume that the pack had been developed first and the resources later to support investigation of various key aspects. And yet it was the other way around: many resource materials already existed and the framework has emerged 'organically' to organise the resources and possible environmental learning opportunities they would support (Paxton, pers comm, November 1998). This mirrors the potential policy development process in schools. Teachers do not have to draw up a policy

Figure 1: Structure of the School Environmental Policy Resource Pack

School Environmental Policy and Management Plan

Key Elements of a School

School Calendar

School Grounds

Curriculum
"the sum of all formal and informal teaching and learning experiences"

Fieldwork

Enviro Information

Audit & Act

Resource Use

Action Projects

Clubs

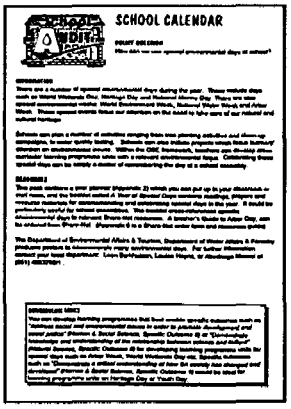
Competitions

Community Knowledge

Adventure & Cultural

Evaluate & Review

Policy Page for "School Calendar"



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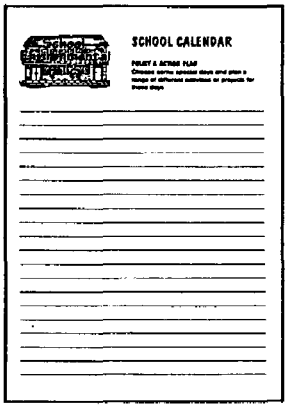

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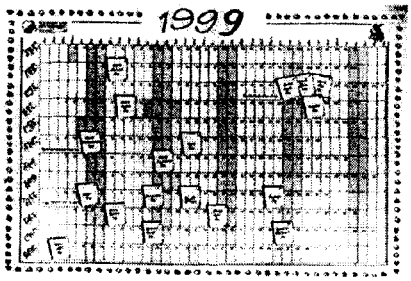
Supporting resources for "School Calendar"



Year planner

Booklet with ideas for celebrating special environmental days

In the policy pack there are loose pages for each of the key elements in the boxes above. The front of the page contains information with ideas for activities and resource materials. The back of each page is mainly blank. Schools can select key elements to audit, fill in policy plans on the back of each page, and compile the pages into their school's policy. The pack also contains a selection of resources to support the various pages (as illustrated on the right).

starting from 'scratch'; rather they can draw on activities and ideas that they are already using and use the policy process to select further areas of concern and to organise and take these activities further.

O'Donoghue (pers comm, January 1999) has noted the flaw in the assumption that if environmental education resources such as the Share-Net booklets are available then teachers will simply choose and use them. This was our assumption in the earlier B.Ed course and we were disappointed when teachers did not really engage with and redevelop resources for use in an OBE context. Slotting the resources into the framework of a school policy meant that the Share-Net booklets became more than simply a collection of resources: instead they were a source of capital which could have a variety of uses within a more focused process.

In the section that follows I explore some of the implications of developing environmental policies at schools drawing on experiences of policy processes in other countries and reflecting on how school policies can support the environmental education processes in schools. I also draw on emerging stories from the teachers who participated in the 1998 B.Ed environmental education module, as documented in interview notes, teachers' assignments and questionnaire responses.

Implications of environmental policies at schools

As stated in the introduction, some of the implications of environmental policies at schools include their potential to provide possible frameworks for curriculum development, to help organise environmental education activities, to enable co-operative policy development (the school within a community), to help manage a school's resources wisely, and to make specific plans for actions.

1. School environmental policies to support curriculum development

1.1 Curriculum and curriculum development

Curriculum can be described as the sum of all formal and informal learning and teaching opportunities. Lotz & Olivier (1998) argue that curriculum is a contextualised social process and that learning programme development in environmental education should be responsive to the contexts and arising issues. In their evaluation of the Urban Foundation's Primary Science Project, Potter and Moodie (1991) noted that curriculum involves levels of policy and intention, and levels of action and practice. Environmental policies can be useful for planning school curricula and organising learning opportunities that are responsive to the local school context.

In a discussion of models of curriculum development Carr & Kemmis (1987:20) came to the following conclusions: "New participatory and consultative organisational structures in schools and systems would be necessary to create a climate in which the intellectual framework for curriculum could be developed. At the school level, participatory decision-making structures and whole-school curriculum planning provided forums for practical curriculum debate." An environmental policy is a possible forum to enable whole-school curriculum development. In the B.Ed course I observed some teachers beginning to develop an interest in whole-school curricula during the 10 weeks of the course.

1.2 Teachers as curriculum developers

In South Africa Curriculum 2005 is bringing many changes to teaching and learning. The outcomes-based framework means that school learners must be guided to achieve a range of outcomes by the time they complete General Education & Training. In the old education system curricula were pre-determined and teachers were provided with fixed syllabi and had little opportunity to participate in the curriculum development process. The new framework requires teachers to become more actively involved in developing learning programmes. These need to provide opportunities for learners to develop many different skills such as making judgments, doing research, making decisions and thinking critically (Lotz et al, 1998).

Included in the transformational ideals of OBE for South Africa is the intention then of enabling teachers to become curriculum developers (Lotz & Olivier, 1998). A school environmental policy development process can play a useful role in supporting teachers to make curriculum changes. There have been significant departures in recent years from the emphasis on external and rational approaches to curriculum change, to curriculum change being treated as a "teacher-centred process of curriculum reconstruction" (O'Donoghue, 1990: 130). This is a key idea in OBE which advocates a move from a content-driven fixed syllabus formulated by the Department of Education to the development of locally-relevant curricula by teachers who have opportunities to select ways of teaching that are appropriate to particular contexts.

Will South African teachers have the confidence to make these changes? In reflecting on working with teachers in the Northern Cape, Mosidi and Tselane (1998) noted that many teachers were confused and not very confident. Some teachers expected complete packages of learning programmes as was the case with syllabi in the old system of education. There is a tension between having no structure and some form of structure that enables rather than restricts or inhibits. Having a focus such as an environmental policy can provide teachers with a broad framework within which they can develop learning programmes relevant to their particular schools. One of the B.Ed teachers, Robyn Marais, said that OBE could be daunting and she valued the resource pack and policy process for "confidence building", something which has emerged as an important element of professional development in recent studies (Janse van Rensburg and Le Roux, 1998).

In his keynote address at the Environmental Education Association of Southern Africa (EEASA) 1998 conference Cliff Malcolm explored the idea of curriculum as story. The implications of this include the perspective of curriculum as multilayered and multidimensional, with a focus on 'meaning' (not simply information), which unfolds as the story unfolds. If curriculum is the story then the teacher is a storyteller. Stories have to be crafted by teachers and there will be good and bad stories. It could be very difficult to tell a story from 'scratch'. A school environmental policy can provide a broad framework for school curricula which can be developed specifically by teachers for their own schools. The policy process provides an outline for an individual school's story and enables teachers and learners to write themselves into their own story (Malcolm, 1998; O' Donoghue, pers comm, 1998).

Lotz & Olivier (1998) noted the increasing realisation that social and educational transformation is not likely to come about through externally implemented curricula and training packages, but through ongoing and reflexive engagement by teachers with aspects of

the learning context. They look at the idea of curriculum as a process of exploring what is unknown and of learning and understanding coming through dialogue and reflection. Learning and understanding are made and negotiated, not transmitted. Zeichner and Liston (1987) have contrasted the idea of a 'received curriculum' where students passively receive a programme specified in advance and taught by experts with that of a more useful 'reflexive curriculum' which reflects a view of knowledge as socially constructed (not certain or unchanging) and provides for teachers and learners to negotiate content. Also inherent in the notion of a 'reflexive curriculum' is the idea of evaluation. A key part of a policy process is evaluation: dialogue and deliberation which can contribute to ongoing clarification and guide management plans.

1.3 Curriculum 2005 and environmental policies

With 'environment' as a phase organiser in the new OBE system, environment can be incorporated into all learning areas of Curriculum 2005. Teachers have commented on the realization that environmental policy activities could help to achieve specific outcomes. Nonhlanhla Chonco from Nichols Junior Primary School explained how, through the course and the policy process, she was able to see how their school could take things further and make more of environmental activities as opportunities for learning and achieving specific outcomes. She linked her school policy activities to specific outcomes. She described how the school celebrated environmental days but had not previously made any specific curriculum links: "At my school we celebrate Arbor Day but we didn't integrate it with the curriculum.... by studying environmental education I can see that the theme for plants must be scheduled for September.... so we can aim to achieve Specific Outcome (SO)4 (Human & Social Sciences) which aims at making sound judgments about the development, utilization and management of resources, and SO6 (HSS) which aims at understanding the interrelationship between society and the natural environment. ... Before we just chose this special day because there were no trees at the school."

Barbara Dlamini from Qanda Junior Primary School noted that her school was already doing a number of environmental activities but "these activities happened accidentally and sometimes we thought they fall under extramural activities. So they were not documented because we didn't know that they were part of the cross-curricular phase organiser, environment." She looked at what they were already doing and how they could integrate this "in order to achieve critical outcomes and specific outcomes we had to mingle our projects with the curriculum".

Zamele Mbambo from St Nivard's Primary used the policy process to plan for environmental themes (like water, plants, animals, transport) and link them to an "environmental curriculum": "Now we will celebrate the special days which we celebrated before without a specific outcome". Zamele's comments are echoed by Rita Mntambo who said that prior to her participation in the professional development course their school had treated environmental education aspects in isolation - they looked at water, pollution and other issues, but without making links. They were not making links between the various aspects nor to the formal school curriculum: "We were doing it but it wasn't part of the curriculum". Another teacher also valued the organisational potential of the policy initiative: "The school environmental policy gives a hands-on and practical approach to environmental problems and activities. It taught me to use the environment as phase organiser in cross-curricular activities".

'Competitions' and 'Clubs' are just two elements of school life which can be incorporated in a school policy and which teachers can use in curriculum development. Makhosazane Ntuli from Nhlambamasoka Higher Primary School linked competition and club activities in her school's policy to specific outcomes. She described a school competition: learners would have to pay 50c to enter the competition and refreshments would be sold. The club would be in charge and this could link to Specific Outcome (SO) 1 in the Economic and Management Sciences learning area: "Engage in entrepreneurial activities", and SO4 from the same learning area: "Demonstrate managerial expertise and administrative proficiency" (Janse van Rensburg & Lotz, 1998). Samuel Masikane from Muzikawuthandwa High School also noted the value of forming a club to "help learners to develop skills such as working in a committee, planning and organising special events and projects, handling money and working as a team to solve problems". Clubs thus have the potential to provide opportunities for learners to achieve a number of specific outcomes.

In exploring the role that environmental policies can play in supporting teachers with curriculum development one becomes aware of some of the policy possibilities for getting environmentally organised. This is explored in more detail in the next section.

2. Environmental policies as organisers

A school environmental policy can provide a framework for getting organised. Developing an environmental policy can be a means of organising the many disparate and fragmented environmental education activities in a school as well as organising better management of a school's resources. In order to get organised it is helpful to become engaged in a developing story and the policy framework can assist with this process (O'Donoghue, pers comm, November 1998).

As can be seen in teachers' comments above, environmental education within the school curriculum is often fragmented as is the way in which environmental issues are frequently addressed (Gurevitz, 1997; Morris & Stoney, 1997). Some form of management of environmental content is necessary so that learners do not find themselves repeating material in lessons or omitting certain sections altogether (Baczala, 1994). School environmental policies have developed as a response to this fragmentation and as an attempt to create a more coherent approach. An environmental policy should enable planned progression: it should "reflect a flexible approach ... [catering] for sequential learning and progression ... [helping] to avoid repetition for some and omission for others"(Bellamy, 1995: 2).

Stevenson (1997) proposes that incorporating the multiple dimensions of the broader concepts of environmental education and education for sustainability (in contrast to the objectives of nature study and conservation education) is a challenging task for educators. Developing school environmental policies with a broad view of 'environment' as a wheel of interacting biophysical, social, political and economic concerns (O'Donoghue & Janse van Rensburg, 1995) can be a way of taking environmental education beyond narrow nature study approaches .

In their evaluation of the policy process in their schools some teachers mentioned having become "more organised". One explained that the resource pack which supports the policy process "gave direction", another that the resource pack was a "guide". One teacher used the policy framework to "timetable action projects". At Pietermaritzburg Girls' High School where Marica de Wet teaches, she discovered through the policy auditing process that there

were already many existing environmental activities in her school. She commented that although it was a huge job co-ordinating her school policy it was worth it - "before people didn't know what others were doing".

In order to provide learners with learning opportunities that are related and make sense holistically, it is important that there is integration between learning programmes. By using the same phase organiser (for example, 'environment') and programme organiser, or topic, (for example, 'water wastage') in different learning programmes, activities can be designed to complement and extend each other (Lotz et al, 1998). A school environmental policy can provide a broad framework for planning and organising learning programmes with, for example, a water theme during March around Water Week with teachers planning various activities which link to provide learners with a more holistic understanding.

Within a school environmental policy process many teachers choose to 'audit' the school calendar and plan for special environmental days. Vusimuzi Khumalo from Khwezi Public Primary thinks that the policy process could allow for better planning: "This year all the arrangements [for Arbor Day] were made at short notice ... as from next year the calendar will be in our school policy. I hope that we will do planning in advance so that we avoid an unnecessary rush." Participating teachers' reports indicated that activities for environmental days are often disjointed and set apart from the rest of the curriculum: these activities can be planned and co-ordinated within a more coherent policy process. One can assume that such learning opportunities will be more meaningful when learners can make links between activities such as tree planting and lessons on, for example, trees, paper, afforestation and deforestation. It is useful for the planning and co-ordinating of school activities to be co-operative participatory processes which take into account the school as/in community. This is explored in the next section.

3. Environmental policies as co-operative participatory processes: (school-as/in-community)

Learners, teachers, parents and the wider community can all become involved in a policy development process that is locally specific and relevant. The experience of participating in developing and implementing policy is valuable in a society striving for democracy. If an ethos of policy participation can be started at schools, learners may have experiences of being responsible citizens and may be encouraged to contribute to policy processes later on in life too. Policy no longer has to be something "up there" that does not really have anything to do with us, is pretty boring to read, and only drawn on when we need to justify something we are doing. Instead policy that is locally generated can actually be useful! In a dynamic policy developing process, what we plan and what we do can be mutually constitutive, shaping each other.

When it comes to matters environmental in a school, activities are usually entirely dependent on the enthusiasm and dedication of one or two keen teachers, or sometimes a committed environmental club. An environmental education programme is, however, more likely to be effective as a "partnership inside a community" (Parry & Scott, 1997) and a school environmental policy enables the development of such partnerships between learners, teachers, parents and the broader community. It has been noted that school environmental policies are opportunities for better links with the local community, most especially parents who can play active roles in supporting various aspects of a school environmental policy such as a paper recycling project or other action projects in the school grounds (Bellamy, 1995).

This does not mean that the school environmental policy process is not frequently dependent on an individual; an enthusiastic individual to act as co-ordinator of the whole process is often essential (Baczala,1994; Palmer & Neal, 1994; my own experiences with schools also provide evidence for this point). Support from the whole school and the broader community enriches the process greatly however and the organising framework of a school environmental policy can provide a means of involving the whole community.

Dudu Ndlovu from Emzamweni High School highlighted the value of a school policy for her as a means of involving the broader school community. A member of the governing body attended the meeting organised by her school principal to explore an environmental policy for the school. Dudu reported that "the member of the governing body was pleased to learn that there would be interaction between the school and community". An environmental committee of seven members was formed consisting of one community member, two learners, and four educators with Dudu as co-ordinator.

Another teacher reflected on the potential that the policy process has for developing partnerships: "It ensures learners, teacher and communities become partners". Rita Mntambo also commented on the policy being useful because it involved "all stakeholders". Robyn Marais added that : "It helps to organise our thinking and gives a crutch for involving other people". Barbara Dlamini commented on the possibilities of a policy enabling sharing with other schools and "sharing with officials for help".

Nombulelo Memela from Sanzwili Public Primary described the policy process as both a challenge and an opportunity. The principal was not interested at first and other teachers were too busy: "It was not all fun ... I had to beg for attention and co-operation from colleagues". Nombulelo managed to find one other interested teacher and they worked together. The policy became a means of doing something tangible which formed the basis for more support: "Now that we have drafted the school policy we are hoping that the proposal will be implemented as a school project ... open day will be the day to market the idea to the school and the wider community ... the principal approves of the idea especially now that the ground work is done."

Individual actions are not sufficient for sustaining and enhancing the quality of life on our planet; the collective efforts of communities are necessary (Stevenson, 1997). School environmental policies can be a means of planning and organising individual efforts turning them into collective ones within a broader framework. These efforts can include better management of school resources and this is explored below.

4. Environmental policies for the management of school resources

Efficient management of a school's resources such as paper, water, electricity, through implementation of well-organised policy plans can lead to considerable savings for schools. Involving learners in water audits at school can lead to the discovery of unnecessary waste of water due to, for example, leaking taps or large toilet cisterns. If an environmental policy is carefully managed, regularly evaluated and findings adequately reported, tangible benefits of environmental policy processes become evident. Other encouraging evidence of a policy and management plan can include improvements to school buildings and grounds as a result of audits and policy plans.

Auditing has come to be seen more and more as a sensible business practice for managing a

business effectively and there is an increase in pressure on educational institutions to follow commercial management practices (Baczala, 1994). Efficient management of school resources has become a particularly important issue in South African schools who are now responsible for paying for the resources they use, including water and electricity. Previously these costs were covered by the government.

Vusimuzi Khumalo from Khwezi Public Primary used the policy process to plan for making savings with three resources which he felt needed attention at his school: water, electricity and the telephone which was under threat of being abused for private calls. Policy plans included installing a public pay-phone to make savings for the school. Other teachers mentioned paper as a resource which could be audited and recycled. One school's policy plans included re-using paper and tins in art lessons.

A further useful outcome of focusing on resource use in a school through an environmental policy is the practical meaning that arises and assists learners to understand abstract concepts such as energy (Bellamy, 1995). This process was evident during a 'mathematical activity' which involved measuring water wasted from a dripping tap and calculating savings that could be made. Activities such as these can lead to making plans to take action to improve the situation.

5. Going beyond description: environmental policies as a means of making meaningful plans for action

Environmental education can sometimes simply involve describing environmental problems. It has been argued that environmental education processes need to go beyond description and should address implications for action: "Environmental education needs to do more than just describe environmental processes. It should help people to find their own local solutions" (Parry & Scott, 1997:1). The policy process can be seen as one of developing plans of action and can be a good way of taking environmental education further than mere description to meaningful action in local contexts.

The school environmental policy process is a way of enabling children to contribute to something meaningful, worthwhile and of specific relevance to them (Bellamy, 1995). If learners are involved in the planning and implementation of their school's policy they can become "active contributors rather than passive spectators" (Bellamy, 1995:2). The policy process becomes a means of writing ourselves into a story.

Some teachers have used the policy process to initiate projects in schools where not much "environmental" was happening. Nombulelo Memela from Sanzwili Public Primary described the policy as a first step and a means of doing something tangible: "It gave the feeling of being responsible and it allowed me to make a little contribution towards initiating progress in my school".

6. Going beyond generalities: environmental policies as a means for making specific plans

Environmental education policies at departmental or governmental levels have an important role to play in supporting environmental education processes in schools in a general way. Policies developed by individual schools, however, can go beyond generalities which, although supportive, are not specific enough for local situations: every school is unique and its unique environmental education policy will reflect this (Bellamy, 1995). A school's

environmental policy enables the development of specific action plans directly relevant to that particular school. The process provides a framework or outline which can be filled by a local plans and actions appropriate to a particular school as participants begin to write their own stories.

Local dimensions of environmental issues are often particular and differ from abstract generalised global dimensions. Lotz & Robottom (1998) give examples of teachers and educators (even those living in fairly close geographical proximity) identifying environmental issues and concerns that are varied. Some focused on waste management, others chose AIDS and one identified water quality in a local river as an environmental risk. Using the local environment as 'text' and developing action plans as part of an environmental policy, teachers and educators can develop locally relevant and responsive curricula.

Zamele Mbambo from St Nivard's Primary used the School Grounds page of the policy pack to make specific plans for maintaining and improving their school grounds. This part of their policy listed activities for maintaining the school grounds, for example, particular classes to be responsible for sweeping floors and corridors. It was decided that there would be a school weather station and a member of staff was appointed to be responsible for this project. A school cleaning campaign was also planned and this was to be linked to Specific Outcome 7 from Life Orientation, "Demonstrate values and attitudes necessary for a healthy and balanced lifestyle"(Janse van Rensburg & Lotz, 1998).

Stevenson (1997) feels strongly that an in-depth study of selected environmental issues is more valuable than the extensive coverage of a broad range of environmental topics. For an in-depth authentic study students need to identify an issue within their local environment that is meaningful, conduct an investigation into that issue, develop a position and make judgments about appropriate actions. A school environmental policy can be the means of planning and enabling this process. As one teacher, Robyn Marais put it: "I think the process serves to both broaden our perception of environmental education and also encourages a focus so that specific action can take place as a ripple effect for a more encompassing policy".

Sharing Stories

Sharing and exploring experiences and telling stories can have powerful effects. Narrative descriptions of successful efforts by ordinary people to bring about environmental change can provide the imagery to encourage others to take action (Bardwell, 1991; also see Monroe & Kaplan, 1998 and Le Roux, 1997). A recent addition to the policy resource pack is a collection of photographs and extracts from various school policies. This has been included this following experiences I have had with teachers who have responded enthusiastically to posters with photographs of different policy aspects in various schools: "Look, those kids have painted their school bins ... we could do that too"; "We also read the school water meter during Water Week" and "We could plant vegetable gardens like that in our school grounds!" are some examples of teachers' comments. It seems that sharing stories through photographs and examples can somehow make the policy process and pack 'come alive' possibly drawing other schools into similar processes.

Conclusion

This research on the experiences of participants in the 1998 B.Ed course shows that teachers in South Africa are beginning to use school environmental policy initiatives to 'get environmentally organised'. Initial findings suggest that the development of school policies is a useful framework for organising environmental education activities and resources in a school because it enables teachers to plan and manage these better leading to greater coherence and organisation within learning opportunities in schools.

These research observations, while limited due to the scope of this small study, are nonetheless important in the light of the significant government interest in promoting school environmental policies as a way of encouraging environmental education in schools. The policy process may overcome some of the significant limitations of the main environmental education thrusts/focuses in the previous government's environmental education activities, namely excursions to field centres. The latter excursions were seldom clearly linked to curriculum, were removed from the school experience, often did not result in action, teachers were not in command, did not have the whole-school effect, provided no opportunities for linking with the broder school community, and did not contribute to better school management.

The development of school environmental policies is proving to be a useful framework for supporting teachers with curriculum development in schools and for organising existing resource materials more coherently. Teachers can link existing resources to and actively engage with the policy framework which also resonates with OBE. The process has potential to assist teachers to plan better learning programmes, to use the local environment and to better manage the school's resources. Some of the issues which one would need to explore further include whether the teachers' initial enthusiasm has resulted in sustained processes at schools, whether additional materials are required and what learners' experiences in the policy processes are.

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