

# ENVIRONMENTAL EDUCATION TEACHER TRAINING: A PARTICIPATORY RESEARCH MODEL

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The need for environmental education teacher training in South Africa is identified as vital for the effective introduction of environmental education into the schools. In devising structures for pre- and in-service training, a participatory research procedure is suggested. Such research has to confront the problems of apartheid education, regional differences and the Third World context of South African education.

## INTRODUCTION

Environmental education teacher training is almost non-existent in South Africa. The few programmes which have been initiated are striking because they are exceptional and necessarily reach only a small proportion of the teaching body. This is disturbing at a time when environmental education is formally poised to be introduced into the school curriculum as a result of the implementation of the principles of the National Policy for Environmental Education (Council for the Environment, 1986).

The role of the teacher in determining whether the aims of environmental education are to be achieved in the schools is vitally important (Sterling, 1987). Teachers have long been identified as crucial individuals in the effective (or otherwise) penetration of environmental education into classrooms (Ballantyne and Oelofse, 1988; Maher, 1986; O'Donoghue and Taylor, 1988). Not only is it essential for teachers to understand the aims and objectives of an environmental approach and to have knowledge of appropriate teaching methodologies, but the cross-curricula nature of the teaching approach demands their close co-operation across subject boundaries (Maher, 1986).

Highlighting the pivotal role of the teacher, the Council for the Environment (1986) has identified the need for environmental education teacher training programmes. The suggestions regarding pre- and in-service training are general rather than prescriptive and need to be tested and informed by careful research and planning. Accordingly, the National Programme for Human Needs, Resources and the Environment, acknowledging the importance of such research for the effective introduction of environmental education into the schools, is funding an investigation designed to produce national guidelines for environmental education teacher training. The primary aims of this research are to:

1. Formulate a conceptual framework for environmental education teacher training in South Africa.
2. Identify and evaluate international and local environmental education teacher training programmes.

3. Develop models and recommend guidelines for the implementation of environmental education teacher training in South Africa.

## PROPOSED RESEARCH METHODOLOGY

Through a literature survey, a conceptual framework for environmental education teacher training will be established in keeping with the guiding principles of international environmental education. These broad directions remain the thrust behind an understanding of environmental education and emphasise that local experience and input are needed to provide the detail and colour of a national framework.

The literature produces numerous examples of environmental education teacher training programmes. These will be classified according to their patterns of implementation and evaluated in terms of:

1. Fundamental environmental education principles, and
2. relevance to the South African context.

Third World examples of environmental education teacher training programmes are deemed to be of particular importance in this study. These have generally had to confront similar educational situations as those existing within this country where the predominating classroom ethos is teacher-centred and aimed at conveying factual information within clearly defined subject boundaries. This system is sustained by the existence of a relatively poorly qualified teaching body, text-book dependency, a high pupil/teacher ratio and the nature of tests and examinations.

From the above, it is clear that guidelines for environmental education teacher training must evolve from the particular educational milieu existing in the country rather than from the mimicking of strategies which have been successfully implemented elsewhere. Accordingly, a cornerstone of the research methodology utilised in this study is participation, producing, as far as possible, a synthesis of the experience, ideas and needs of local teachers, environmental educational specialists and administrators. To be implemented effectively, guidelines need to be 'owned' by all participants in the educational experience.

Due to the strong emphasis on local participation in the determination of guidelines for teacher training, a major component of the research methodology is aimed at identifying and investigating the structure and nature of existing national programmes. Due to the racial character of the South African education system, it is

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felt that it is essential to evaluate those programmes where functional links have been established between Education Departments, Parks Board bodies and private organisations. Such co-operative ventures hold the key to the emergence of guidelines allowing for the establishment of a non-racial structure of environmental education teacher training. It is proposed, therefore, to visit selected environmental education programmes run by universities, colleges, education departments, national parks, and private and public organisations. The structures will be evaluated in terms of their suitability and flexibility in allowing for the non-racial education of pre- and in-service teachers.

Arising out of the investigation and classification of international and local programmes, a number of models will be developed which could be adopted for use in South African pre- and in-service environmental education teacher training. These models will be presented at two workshops. The first, attended by a range of representatives from differing interest groups including environmental education specialists, Parks Board and Education Department employees and teacher trainers, will examine the viability and acceptability of the proposed models. Problem areas will be identified and, where necessary, suggested modifications incorporated. At the second workshop, the refined models will be presented to representatives of the teaching community for their reactions, criticism and input. The final models which emerge will thus represent a synthesis of interests and emphases from the entire spectrum of those who will be involved in the execution of the programme.

Based upon the end result of the research process, guidelines for the implementation of environmental education teacher training in South Africa will be proposed. Positive and negative implications of introducing various models will be outlined and areas where more research is needed will also be indicated.

#### PROBLEM AREAS

Although the research is in its preliminary stages, certain problem areas needing careful attention are already apparent. The major one lies in the very nature of the South African education system. Apart from the bureaucratic functioning of the eighteen Departments of Education and obvious problems this would cause if Departmental structures were to be pursued, there are, implicit in the system, basic elements diametrically opposed to the principles of environmental education. Racial segregation and institutionalised apartheid education are at odds with the aims and spirit of environmental education. This, in effect, means that any teacher training strategy proposed along Education Department lines, would be in conflict with the National Policy on Environmental Education (Council for the Environment, 1986), since careful scrutiny of the said document indicates close concurrence with internationally determined aims of the approach. For this reason, alternative routes of implementation will, as indicated in the research procedure, be considered, for example, via private organisations or Parks Board channels.

A second problem arises when one considers the scale of implementation if pre- and in-service environmental education teacher training is to be introduced nation-wide. Concurrent with this thought, runs an awareness of the characteristically different natures of the provincial or regional bodies which will be charged with providing environmental education teacher training. While these bodies are subject to national regulation, the interpretation and spirit of implementation of regulations varies, allowing for different degrees of flexibility and participation in the decision-making process. To accommodate these differences, national guidelines produced should be conceived of as directions for negotiating a regionally acceptable model of implementation. The end-products of such interactions may very well lead to the adoption of differing strategies within regions, resulting in different teacher training structures in tune with the local 'Zeitgeist'.

Further problems, symptomatic of education in many Third World countries, arise because environmental education has a local bias and emphasises practical involvement in the immediate environment. According to Knamiller (1985, p.3), "... this is not what children and parents and teachers see as relevant education. To them, the school should maintain its academic, abstract and urban middle-class bias. Schooling is a vehicle out of the community, not a process for improving local conditions." Supporting this view, is the adoption of a teaching methodology which is text-book based, syllabus-orientated and examination-directed (Ballantyne and Oelofse, 1988; Vulliamy, 1987). These factors could mean the thwarting of environmental education goals and certainly imply that serious attention be given to the nature of environmental education teacher training programmes and to the position accorded to the approach in the schools in terms of certification. Unless these issues are dealt with, the introduction of environmental education into the schools "... in the absence of a massive in-service training programme ... is likely to lead to confusion and demoralisation for teachers" (Vulliamy, 1987, p.14).

#### CONCLUSION

The overriding priorities of the above research proposal are immediacy, relevance and negotiation in embracing the demands of contextual education. The project commenced in February 1988 and is scheduled for completion in June 1990. Many ideas are still being formulated and input from all those concerned with environmental education in South Africa is vital for the future successful implementation of environmental education teacher training programmes.

Feedback, positive and negative, is invited and any ideas or suggestions regarding research directions would be most welcome. Environmental educators are therefore urged to use this opportunity to influence the pattern of structures which will inform, indeed shape, the future of the environmental education of teachers in Africa, for Africa.