

# Reflections on environmental education: past development and future concepts\*

## Conference reflections

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In attempting to review the recent progress and outline a few of the remaining problems in environmental education it is important, but also because of the scope of the task extremely difficult, to find a suitable structure that will provide some continuity. I have elected therefore to comment firstly on the fundamental issue of philosophy, of what we mean by environmental education and what we acknowledge as practical examples; secondly to discuss a few prominent issues of teaching and learning in four different spheres of education: primary and secondary schools, higher education (universities and colleges of advanced education), technical and further education (TAFE), and non-formal education; and lastly to comment on two general issues in environmental education that relate to the entire field, the first to participation and the need to identify and make suitable provision for those sections of the community who have as yet had no formal contact with environmental education, and the second to the special problems and teaching demands arising from its characteristic focus on the development of attitudes and values and appropriate behavioural change.

To take firstly the issue of philosophy: it appears that the level of discussion on the nature and objectives of environmental education has advanced considerably in the past decade. The sometimes bitter and generally unproductive arguments of the early 1970s about what was and was not related to environmental education seem now to have largely disappeared, being replaced by a more or less common dialogue about the nature and purpose of environmental education and ways in which it can be further developed. Nevertheless, despite this general and encouraging trend there still exist some significant areas of disagreement and confusion. One example concerns the distinction between environmental education as a movement or collective enterprise and as a description of individual activities or programmes. This distinction is an important one because of different expectations — in the former case that it necessarily reflects an interdisciplinary character and has a clear emphasis on problem-solving and decision-making activities; but this is not to say that a particular programme which fails to reflect these emphases has nothing to contribute to environmental education.

To take the point further, a recent postal survey conducted among Victorian secondary schools asked whether any form of environmental education was included within the school programme, and if it was whether it reflected an integrated or "co-ordinated multi-disciplinary approach" (Education Department of Victoria, 1981: 23). About 90 percent of schools responding to the survey claimed to have included environmental education as part of the school curriculum, but less than 10 percent claimed to have co-ordinated multi-

disciplinary approach. Does this represent a success or failure in environmental education? Surely it is at least a partial success, and I believe it may well be more than that. It indicates, for example, a widespread acceptance that environmental education, in some form at least, has a recognised place in the school curriculum, and the fact that it may now have been established as a fundamental, all-pervasive theme should not be allowed to undermine the more important issue of its existence. Whatever the limited nature and scope of courses conducted under this general theme it must be acknowledged that they have a legitimate contribution to make to the enterprise of environmental education, and that they need not individually reflect the entire enterprise in miniature.

A second point relating to philosophy concerns the use of analytical models. In explaining the general importance to environmental education of developing appropriate attitudes, values and behaviour it is often helpful to relate this development to some form of theoretical model. There are a number of models which have been developed which purport to explain the underlying bases of individual and social behaviour, all having their respective contributions to make but none of them are adequate individually to account for the extraordinarily complex range of factors which influence human behaviour. There is a danger therefore that if we attempt to relate too closely or exclusively the development of environmental attitudes and values to any one such model, the importance of the characteristic outcome of conservationist behaviour may be undermined by the patent inadequacy of the model on which it is based. The lesson in this is that we need at all times to maintain a clear and explicit distinction between the outcomes that environmental education seeks to develop and the processes, more particularly the theoretical and inevitably simplistic models of those processes, by which these outcomes may be achieved.

Turning now to more practical matters of curriculum, there seems to have been, particularly at the primary and secondary levels, considerable development in recent years of resources for environmental education. Where a decade ago there appeared to be a dearth of relevant curriculum materials there is now a wide variety available, of both Australian and overseas origin, much of which could readily be adapted to suit particular local needs. But the disappearance of this constraint, which was once seen as very important by teachers in limiting the growth of environmental education programmes, has not in itself been a catalyst for widespread development. Other problems still remain — practical issues of timetabling and administrative inconvenience (particularly the inevitable disruption involved in outdoor studies) as well as the more fundamental problems of academic territoriality and the demarcation of traditional disciplines — all of which can and must be overcome, but which will require persistent effort, diplomacy and skill. At least one problem, lack of resources, has now been substantially overcome, though there will always remain the task of adapting curriculum resources

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to local community needs which for years has been a cornerstone of environmental education programmes.

One notable deficiency still in the field of environmental education has been the lack of systematic research on curriculum and teaching strategies. The reasons for this are unclear, but it is a point of serious concern that the intense research activity which accompanied the development and introduction of, for example, the Australian Science Education project has been conspicuously absent. The peculiar emphasis which environmental education gives to the teaching of attitudes and values, as well as to decision-making skills and opportunities for practical involvement in local community issues ought to provide a wealth of opportunities for educational research which would have implications far beyond any bounds of curriculum content involved in particular programmes. But so far lamentably little of this extraordinary research potential has ever materialised.

In the higher education field there appears to have been relatively little development over the past few years, and indeed the specialist courses developed in many institutions during the 1970s seem in some cases now to be under threat of reduction or even closure. Two factors have worked against these courses, both largely circumstantial but serious nevertheless. One is the persistent financial constraints imposed on universities and colleges from the mid-1970s which, through prevention of new staff appointments and replacements, have selectively penalised areas of new development and relatively high staff mobility. The second is the inter-disciplinarity of environmental studies programmes, which led to their establishment under separate administrative boards of studies based on existing departmental or disciplinary structures and having no independent identity, hence no permanent basis of political influence within the institution. The combination of these two factors has seriously diminished the once encouraging prospects for development of specialist environmental studies programmes, and despite strong continuing student demand, has placed their long term future in jeopardy. It is important therefore that every effort be made to secure a permanent and recognised place for these programmes within the higher education system.

Another area of concern in higher education is the level of provision for environmental awareness and understanding in areas not directly or exclusively concerned with environmental impact — in commerce, for example, or politics, engineering and other technologies. It is an important objective that all such courses which are intended to train future decision-makers should ensure at least a basic level of environmental understanding. The present concern is not so much that this issue is being ignored but that we do not really know how well it is being carried out. Some monitoring research is clearly necessary in this field, and should be recognised as one of the immediate priorities in environmental education.

The same could also be said of the technical and further education sector. Its importance in the training of tradesmen, technicians and a host of other skilled workers of the future whose actions will, directly or otherwise, have an important influence on the environment demands that we ensure for these students an appropriate sense of environmental understanding and concern. Again the problem is no so much that their education is in this sense deficient, but that we do not know whether or not it is deficient, and cannot therefore take appropriate corrective action until we do. This area has already been formally acknowledged by the Association Conference as a matter of immediate priority, and that status is well deserved. The number of students in trade training alone — and this is a minor part of TAFE activity — is almost equivalent to the entire population in universities or in colleges of advanced education, and yet there has to date been no systematic survey of the level of environmental awareness incorporated in such courses. There is clearly an urgent need at least for some baseline information in this field, and ideally for the establishment of a survey sampling or reporting system by which it can regularly be reviewed.

The final area of education to consider is the non-formal sector, which in terms of the number of people it encompasses is perhaps the largest of all. It is also in many respects the most complex, including a vast array of courses covering subjects and activities from recreation, arts and crafts to languages and other academic studies, and an equally varied range of providing agencies. Because of this it is extremely difficult even to circumscribe the general field of non-formal adult education, and more so to evaluate the emphasis within it given specifically to environmental education. But difficult or not it is an extremely important area of public education and therefore one which cannot be ignored as a potential source of public influence and support for environmental attitudes, values and behaviour. This too must be acknowledged as an area of high priority for research, both to assess the nature and extent of present environmental emphasis and to attempt to find the most effective ways of promoting throughout the entire community a sound environmental ethic.

This raises the general question of participation in education and the possibility of consequent bias in the nature of the population served, and by implication thus exposed to whatever limited opportunities are provided for environmental education. The majority of the present adult population, for example, could not possibly have been exposed to any formal study of environmental issues throughout their years at school because of the relatively recent development of this area as part of the school curriculum, so that unless they had obtained some alternative exposure in later years their only understanding of environmental issues would be that derived from the public communication media — television, radio, newspapers and magazines — whose attention to factual detail and to balance in presentation has in general been considerably less than ideal (Linke, 1980: 160-176). It follows from this that the group most likely to have had some positive experience in environmental education are those with some form of tertiary education, particularly if this has occurred in recent years, and that others in the community who in educational terms might be considered disadvantaged (women, certain migrant groups, Aboriginal people and people generally from rural and from lower socio-economic areas) have probably had little opportunity at all for any balanced and genuinely educative exposure to significant environmental issues.

If we are really concerned about public involvement in decision-making and increasing public awareness, understanding and support for environmental issues then we must be particularly concerned to find more effective ways of reaching the educationally disadvantaged community. This is not simply a research problem but a developmental one as well; intuitive methods must be tried as a matter of urgency, with evaluative research also taking an important but, for a while, subsidiary role. The first problem is simply to communicate; questions of educational efficiency can be addressed at a later stage.

The second general problem in environmental education is essentially a methodological one derived from its characteristic focus on affective and behavioural aims. For the most part, at least in formal education, we tend to teach by precept rather than by example; but the teaching of attitudes and values, the resolution of conflicting views and encouragement of conservationist actions cannot be taught effectively by precept and rational discussion alone. It demands a personal commitment that goes beyond the normal expectation of teaching behaviour and requires, among other things, a critical self-appraisal of both the teacher's and students' (and, by implication, their respective families') personal lifestyle. This of course is not an easy task, but the aims of environmental education are not like those of traditional academic disciplines in which the only form of appreciation required is that of the discipline itself. Environmental education seeks to promote a particular mode of living as an expression of certain basic values, and must inevitably be undermined by obvious signs of conflict between what is taught and what is observed in the teacher's way of life.

Related to this problem of teaching is also one of assessment. The notion of assessing student behaviour other than in the context of, say, laboratory skills or certain aspects of professional competence is, to say the least, uncommon to present educational practice. And even if the question of ethics were ignored (and that is by no means an insignificant one), the issues of environmental interest are so complex and the methodology of attitudinal and behavioural assessment so crude that the task of judging achievement of individual students would be all but impossible. Even the evaluation of whole teaching programmes is as yet barely past the embryonic stage, so that in this area too there is still a great need for sound educational research and, I believe, great potential for worthwhile knowledge to be gained.

It will be apparent from these remarks that there is no blueprint for success in environmental education. While much has been done to stimulate public awareness and to develop new educational programmes and the resources with which to teach them, much more still remains to be done both to assess precisely how far we have come and how we can progress more efficiently in the future. Perhaps as a first step we should begin to define a policy on environmental education, partly as a catalyst to clarify the different expectations we may hold for different educational levels and in different (formal and non-formal) spheres of influence, and partly as a basis for subsequent evaluation, at least as a baseline for the inevitable questions of public accountability when we are asked at some future stage how well we have capitalised already on whatever public support may have been provided. Indeed without such a policy it is difficult to see exactly how far we have come to date and how much further we can expect to go; how efficient has been our progress to date and how much more we will have to achieve with equally limited resources in the future.

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