

Environmental education - trends in school curricula

One of my main purposes in this presentation is to provide a sample of what is happening in environmental education (e.e.) at the school level in Victoria, as partial grounding for wider deliberations in this symposium. I also hope to briefly explore some of the links between what is happening at the school level and notions of a liberated and liberating curriculum, the socially-critical school and a national curriculum for e.e..

I speak from the perspective of someone who has been extensively involved in e.e. for over 15 years in a variety of ways (for example, as a teacher and author and in various policy development and professional development roles). I am currently the Executive Officer of the Victorian Environmental Education Council (VEEC), which is responsible for monitoring e.e. and advising the Victorian Government on the coordinated statewide development of e.e. across all sectors of the community.

Among other things, VEEC runs an e.e. grants program to encourage innovation and excellence in e.e., with a particular focus on supporting locally-based initiatives. VEEC has been in full operation for a little over 12 months and in that time has received 1131 applications and made 184 grants (totalling about \$345 000). 134 of these grants were to schools and a number of the other grants involved schools in various ways.

I regard e.e. philosophy and practice in Victorian schools as being, on the whole, at a relatively early stage of development and evolving rapidly. There are those who say that e.e. is nothing new, that "e.e. has been around for years". But they are talking about a small proportion of schools and about relatively limited, traditional curriculum approaches, not a widespread trend with a considerable degree of curriculum innovation and sophistication such as we are currently seeing.

Recent experience with VEEC's grants program and the general monitoring of e.e. in Victoria shows that currently:

- Schools are involved in e.e. initiatives which cover a wide range of environmental issues and educational approaches.
- While school e.e. initiatives are often relatively brief and/or narrow, there is a trend toward programs which are quite comprehensive and integrated across a number of curriculum areas and year levels, and which attempt to deal with the environment in its totality rather than as isolated topics.
- School e.e. initiatives are largely locally-based and there is a trend for the planning and implementation of these initiatives to feature a considerable degree of control by students, parents and members of the wider community as well as teachers. Local control of e.e. initiatives, within broad guidelines, is currently encouraged by state policy (e.g. the Ministry of Education and Training's Environmental Education Policy and more general curriculum policy for the Victorian Certificate of Education (Yr 11-12) and Curriculum Frameworks (P-10)) and practice at the system level (as exemplified by the

VEEC grants program). The broad guidelines include the need to meet social justice/equal educational opportunity criteria.

- There is a trend toward learning through first-hand investigation of environmental issues of local relevance, and active student involvement in resolving these issues. Environmentally-responsible management of the school's own operations is becoming an important focus.
- Curricula which deal directly with values and attitudes are increasingly common

It must be emphasised that while there is a clear trend to comprehensive, integrated, democratically controlled, action-oriented programs which deal directly with values and attitudes, such programs are at this stage far from typical of Victorian schools. E.e. is a complex and challenging field, which, while there is wide general acceptance of its importance, is proving difficult for some teachers and schools to come to grips with in terms of detailed implementation.

Tracing back from these observations on what is currently happening in e.e. at the school level, the following personal perspective provides an indication of historical developments in e.e. curricula.

I started teaching in 1973 as a secondary science teacher, coincidentally the same year that e.e. was designated as one of five priority areas for national curriculum development through the Curriculum Development Centre. I soon became convinced of the importance of certain curriculum features, including those in Figure 1 which will also be referred to by other presenters in this symposium. As can be seen from this figure, socially critical pedagogy is a key feature.

FIGURE 1 - Possible features of an environmental education curriculum

- learning is active and experiential
- classroom dialogue introduces elements of critical theory and encourages pupils to think critically
- pupils begin to see themselves, their histories and futures, in new ways. They develop a sense of their own power to shape their lives
- values education develops comprehension of the sources of beliefs and values, how they are transmitted, and the interests they support
- pupils reflect on the structural and ideological forces that influence and restrict their lives and on democratic alternatives
- pupils are taught how to act democratically with others to build a new social order
(Huckle, in press)

- education in or about the environment was not enough: the need was for education for the good health of the environment
- we were not to see ourselves as apart from but integrally part of the Australian environment(s)
- environmental education was to be real environmental problem-focused education
- EE was accepted as not being a descriptor that was used for its type of knowledge but it was much less clear what this meant or how it could be related to formal education, which had (and has) a structure and epistemology that is rooted in disciplinary knowledge
- action and learning were seen as being symbiotic aspects of EE in all its stages - a very different pedagogical view from that which prevails in much of substantial learning
- the framework of EE has a stronger balance between cognitive learning, skill learning, and an affective learning than is acknowledged for most other academic disciplines
- "affective learning" included affection for, interest in, concern about, commitment to, and senses of urgency in relation to the environment
- there was a strong sense that learners in EE had to get out of their cloistered classrooms and experience at least some of the environmental situations with which their EE was concerned.
(Fensham 1987:22)

My interest in this style of curriculum was not only from an e.e. viewpoint but also from that of a "good general education". I developed teaching approaches along these lines. While I can't go into these approaches here, some have been described elsewhere, including in publications which were part of various national curriculum initiatives (e.g. Malcolm 1981, 1988). Figure 2 gives an indication of one particular line of approach based upon local environmental action.

Because of my interest in this style of curriculum, I looked fairly hard for similar approaches in other schools but found none. This isn't to say none existed at that time, but if they did they were relatively scarce. I would also observe that e.e. curricula of *any* type were far from commonplace in the early and mid 1970's.

FIGURE 2 - Educational principles for environmental action programs

Depending on how they are run, action programs can be very effective for developing the environmental attitudes, abilities and understanding of those involved.

To get the greatest educational benefit from an action program, keep the following points in mind:

The "ideal" action program...

- * *is seen by the participants as being their idea and under their control (although sensitive assistance from "experts" can be very beneficial)*
- * *aims for fair consideration of all viewpoints and informed, reasoned decision-making which takes all factors into account, including people's feelings and values*
- *emphasises following up decisions with action, involves having an effect on the community and realising that one's own actions can make a difference*
- * *aims for broad community involvement - community groups, schools, government, businesses etc.*
- *is environmentally sound - considers the overall effect on the environment, works with nature rather than takes over from it, avoids high levels of resource use (energy, water, materials etc.)*
- *is oriented towards the realisation that everyone's demands for goods and services add up to a major cause of environmental problems - that we can all take action by being environmentally responsible in our own behaviour and choice of lifestyle and by encouraging others to do the same*
- *draws on many fields of knowledge and skill and shows how these come together to assist with a real-life problem*
- *involves creative problem solving, devising ways of getting things done.*

The circumstances in which action programs develop will tend to act against them matching up perfectly to an "ideal". They tend to develop from small beginnings through a process which is dependent upon many uncontrollable factors.

The notion of an ideal action program is intended more as a guide for maximising the effectiveness of a program than as a prescription which must be followed rigidly. However, the principle of participants feeling it is *their* project should be regarded as vital for achieving effective participation. It is upon this which everything else depends.

(Malcolm 1989:2)

During the late 1970's and early 1980's, democratically-run, action-oriented approaches in e.e. such as the ones which I was using and advocating began to attract interest and receive relatively broad approval (exemplified by many requests for advice and statements of support from teachers in other schools and by the considerable number of invitations I received to publish, lecture, join policy committees etc.). However, despite this apparent interest and approval, there was little sign of the wide adoption of these approaches by schools. An illustration of this is in the character of the approximately 200 applications received during a 1985 e.e. grants scheme I was involved in. These showed that although there was considerable interest in the environment, things like democratic control of student

learning programs and student participation in community decision-making on controversial issues were rare in school e.e. curricula.

Between 1986 and 1989 I carried out a national search for case studies to use in a book which I was developing (Malcolm 1989). Figure 2 is an extract from this book, which was intended as a resource for people pursuing e.e. through democratically-controlled local action to care for the environment. It wasn't easy to find suitable examples.

At the present time, as indicated earlier, there is evidence that a number of Victorian schools are beginning to adopt an e.e curriculum with the general characteristics I have been describing. Some system-wide curriculum initiatives in particular subject areas are also changing in this direction. This is exemplified by Yr 11-12 Biology which for many years was dominated by the well-known "Web of Life" national curriculum initiative. During this time schools did little to incorporate into their Biology curricula an e.e. dimension in the style described above and I don't believe "Web of Life" encouraged them to do so. In contrast, the Biology Study Design for the new Victorian Certificate of Education does much more to encourage things like democratic control and student participation in addressing environmental issues. The strength of this thrust is illustrated by the Science Teachers Association of Victoria's decision to select an e.e. approach along the very lines I have been describing when they invited me to write the book for Unit 1 of their four-part VCE Biology series. This has now been published (Malcolm 1991).

As a curriculum development phenomenon then, school e.e. curricula which include the features discussed above have been a long time coming and are still far from commonplace. This is despite fairly widespread teacher interest in, and approval of such an approach from a relatively early stage. It should be seen in the context of various national e.e. curriculum initiatives over a number of years, the character of which will be examined by other presenters in this symposium. This raises a number of issues, including professional development and industrial issues, and issues of style and effectiveness of national and state curriculum approaches. My feeling is that implementation of this style of e.e. curriculum was and is seriously constrained, even among otherwise receptive teachers, because of anticipated or actual difficulties such as:

- inadequate teacher preparation in terms of pre-service and in-service professional development (which affects teacher confidence and willingness to attempt curriculum change as well as teacher ability to conceive and implement change);
- conflicting messages influenced by those advocating a more instrumentalist approach to e.e.
- resistance from a proportion of students, parents and others who are accustomed to and uncritically-accepting of existing curriculum approaches;
- Teacher concern about the extra time which might be required of teachers to implement appropriate curriculum change, especially in view of the greatly increased demands already placed on teachers and the difficulty of arranging time release for curriculum development and professional development;
- difficulties presented by a conventional timetable and other structural features of the existing curriculum (much less of a problem in primary than secondary schools).

These types of constraint are of course not unique to e.e curricula.

The degree to which a national curriculum approach for e.e. might be expected to help or hinder action to overcome such constraints is problematic and would depend entirely on the details of the approach adopted. A national approach which offered substantial support (including appropriate curriculum advice) for locally-based, democratically-controlled curriculum development/professional development would seem very worthwhile. This is particularly so in the case of schools which have not yet taken their environmental responsibilities seriously, which don't have a democratic style of operation and which await central policy guidance before responding to emerging community needs.

The Victorian experience suggests that at least on a state-wide scale, it is possible to achieve central policy and centrally-managed support initiatives (like the VEEC grants program) which are capable of encouraging things like democratic local control of curriculum and active student involvement in environmental issues. However, what can be agreed upon within one state would seem likely to be very different to that which could be agreed nationally. Given that even mentioning the environment in the Hobart statement of national goals was contentious and that in this statement the environment was so firmly linked with "development", the type of national curriculum guidelines and programs for e.e. which one might expect to be agreed upon nationally would probably be very limited. If this was so, a national approach might well inhibit e.e. curriculum development in many schools or at least it would be a relatively ineffective use of e.e. resources. The current national ascendancy of an economy-centred, "big-player"-dominated, instrumentalist approach to ecologically sustainable development further highlights the need for concern.

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