

Towards education for the environment

Education for the environment?

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This paper will begin with an attempt to address the question: "What presuppositions about teaching and curriculum are embedded in the developed conception of environmental education as education *for* the environment?"

The answers advanced here will be tentative in nature and obviously incomplete. They will, however, allow the discussion to advance to a consideration of teacher behaviours compatible with the education *for* the environment concept, and to an appreciation of the dilemmas confronting teachers of environmental education so conceived.

Presuppositions about teaching and curriculum that can be extracted or inferred from the descriptive statements of the formulators of the concept of environmental education would include:

- Worthwhile knowledge in environmental education programmes is procedural knowledge i.e., knowledge as capacity-to-do.
- The emphasis in the teaching of environmental education programmes should be on the processes of problem solving/decision making, and the clarification of personal values.
- Procedural knowledge and the processes therein are not constrained by discipline-based subject boundaries and therefore learning within environmental education should not be so constrained.
- Awarenesses derived from tacit learnings, appreciations, feelings, sensitivities are deemed worthwhile, and should be integrated with more cognitively (consciously) acquired understandings of the environment.
- Learning activities in environmental education programmes should reflect the interests of the learners, be realistic and experiential. A significant proportion of these activities should focus on choice and action in a context which is within the action-horizon of the learners.
- The learning milieu within environmental education programmes is person-oriented. Emphasis is placed on developing a predisposition for active participation in environmental issues and on the acquisition of social values and concerns for the environment.
- Learners are to be encouraged to develop independence of thought and personal autonomy in environmental matters.

The seven presuppositions provide curriculum structuring elements relevant to the concept "education *for* the environment". From them we can draw up curriculum aims and objectives. We can also draw up principles which could be used by teachers and others to decide on the type of activities to be included in an environmental education programme. And, just as importantly, we can draw upon these presuppositions about teaching and learning to propose a form of teacher-pupil interaction likely to shape particular environmental education activities into a programme that

would be compatible with the concept of education *for* the environment.

A discussion of curriculum aims and objectives, and of guiding principles for selecting broad types of activities is obviously important and necessary. However, I believe it is more important at this time to focus the discussion onto a consideration of the form of teacher-pupil interaction that would be in harmony with the curriculum concept of environmental education which emphasises the development of awareness, attitudes and values, together with the development of problem-solving and decision-making abilities. Environmental education so defined is predisposed to involvement in issues of a controversial nature — a predisposition resulting largely from an orientation towards problem-solving and decision-making objectives. This aspect of environmental education becomes most obvious when one takes heed of the fifth presupposition cited in this paper, and defines an environmental issue accordingly. There is a tendency amongst environmentalists to define environmental issues broadly. But for environmental education programmes environmental issues may be more localised phenomena directly involving the student's community and thus the students themselves. Obviously these issues will be exemplars of pollution, conservation and the other broad categories of environmental issues but the focus is likely to be on the particular.

An appropriate issue would be a situation students can identify with and which involves conflicting proposals for action. The proponents of these proposals are considered. People (including the students) make judgements and form an opinion of what they believe is the best form of action. In other words, an environmental issue develops. The issue revolves around the form of action that should occur.

Given this definition of an environmental issue it is realistic to expect teachers of environmental education to feel outside-the-classroom pressures as a result of involvement in an issues-oriented programme. Colleagues, members of the school administration, parents and community groups may express concern if they perceive a teacher to be encouraging a class of students to become involved in an environmental issue over which the community is divided.

What are the alternatives available to teachers of environmental education in this situation? There appear to be at least three:

- Teachers may avoid these external pressures by not embarking on an issues-oriented programme. This alternative, however, would probably result in diminished student achievement on problem-solving and decision-making aims and objectives as structured by the earlier presuppositions.
- Teachers may behave as an authority on the substantive aspects of the environmental issue in question. The danger of this alternative is that the students tend to be placed in a passive, subordinate position with respect to knowledge about the issue, and are thus predisposed to being

influenced by the teacher's attitudes and values. If the issue is a politically controversial one in the local community, then the teacher may be seen to be aligned with a particular political group associated with the issue. This danger can be avoided if the teacher refrains from making explicit value statements. In this case the programme ceases to be issues-oriented (as defined above) and becomes 'Education *about* the Environment'.

- Teachers may attempt to establish a role in the classroom of facilitating inquiry into the issue. That is, a teacher may not act as an authority in knowledge about the issue, but act to encourage and assist students in opening up the issue to balanced examination. Students would be encouraged to draw their own conclusions based on their own investigations. Different students may arrive at differing proposed resolutions. For the teacher, the prime intent is to use the issue as an educational vehicle for developing comprehension of, and skills in, the problem-solving and decision-making processes associated with the resolution of environmental problems. If teachers' aims are process-oriented, and if the teacher-pupil interactions are consistent with these aims, then teachers of environmental education have a responsible defence against external expressions of concern.

By adopting this third form of teacher-pupil interactions teachers not only have a defence against outside criticism, which is an important pragmatic consideration, but they also have a teaching orientation which is compatible with the concept of 'education *for* the environment'.

Adoption of an inquiry teaching mode, with the diminished role of the teacher as the knowledge-authority figure in the classroom and the corresponding increased level of student independence of thought and valuing provides teachers with the potential to develop a coherent practical theory of teaching capable of operationalising education for the environment approaches.

Inquiry teaching belongs, with several other descriptors of teaching styles, in the non-directive classification of teacher-pupil interactions. Non-directive teaching places the teacher in a facilitatory role in the classroom. This role has been promoted in the past as the appropriate teacher role in values education (Raths, Harmin, and Harmin, 1966), in problem-solving or inquiry teaching (Elliott and Adelman, 1975) and in establishing a learning climate that encourages open participative learning. Facilitation is a teaching emphasis which places the onus on the student to a considerable extent, to participate and to be practically involved in his/her own learning.

The facilitator's primary responsibility is to encourage participative learning in a non-judgemental climate. Such a climate is thought to encourage freedom of opinion and dissent. Students are encouraged to say what they think, and not what they think they ought to say. Students are free to express ideas and attitudes without fear of hostile criticism, but they are discouraged from relying on 'tried and true' methods of problem solving which have been typically used in the past to direct students towards the right answers. A facilitator would avoid didactic teaching; his/her aims would be to elicit ideas, opinions, expressions of attitudes and values, and not to transmit accepted theories and techniques.

The teacher behaviours associated with non-directive teacher-pupil interactions consciously focus on advancing student autonomy and self-directed learning, on developing capacities to make assessments and to take action, on developing critical awareness and dependable values. Teachers of environmental education programmes must reflect upon their behaviours when interacting with students and think through the ramifications of traditional, good teaching behaviours. If students are to develop the abilities and values associated with environmental education, then they require opportunities to develop confidence in their own thinking and judgements, and to develop a critical attitude (in the positive sense).

If a teacher's accustomed style of teaching is oriented towards imparting factual information then that teacher's

habitual teaching behaviours may well be an obstacle to successfully establishing an environmental education programme with strong problem-solving and decision-making components and with a commitment to values development.

Common teacher behaviours associated with traditional product-oriented teaching are:

- asking leading questions and making leading statements;
- rejecting or discouraging responses and ideas;
- reinforcing response and ideas with praise or other forms of positive evaluation; and
- inviting consensus and then rephrasing the student's comments in a summary or conclusion which contains more of the teacher's ideas than the students.

These teacher behaviours act to develop or maintain the students' dependence on the teacher. They act to 'short circuit' the learning process and to downgrade the level of thinking required by the students. Children are informed by these behaviours that the teacher has an acceptable answer or outcome to an activity and any other attempts to encourage independent student behaviour are unlikely to be taken seriously. (*Why bother to think about a problem or an issue if the teacher is going to give you the answer anyway.*)

For teachers intending to be involved with environmental education programmes of the type associated with the 'Centre' (in the model of curriculum development discussed earlier) it may be necessary for them to undergo a theory-shift before they will feel comfortable within the programme. The practical theory of the recitation which dominates in our schools today would need to be replaced by an alternative practical theory of process/inquiry teaching in the minds of environmental education teachers before education for the environment becomes established in our schools. It would be foolish of us to dismiss this necessary transition for teachers as a simple task. The overwhelming conclusion to be drawn from the studies of curriculum innovation is that the teacher in the classroom is able to maintain (some would say — can only maintain) teaching practices unchanged in any fundamental way given current curriculum development and dissemination strategies, and in-service teacher education approaches.

We must not underestimate the difficulties most teachers (and ourselves) would have in firstly, establishing the conditions in a classroom by which an activity can become viable in the sense that it engages the children in self-directed learning; and secondly, interacting with the children while they are engaged in the activity in a way that extends their thinking but does not take the control of the activity from the children.

References

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- Raths, L., Harmin, M., and Harmin, S., 1966, *Values and Teaching*, Charles E. Merrill Publishing Co., Columbus.