Research directions in social and environmental education

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Social and environmental education are two sides of a coin. Each has similar student-centred goals that see an understanding of society or the environment and one's place within it as a medium for achieving some of the long term goals of education. The similarities between the two have not been recognised nearly as much as they could have been, though Disinger (1982) among others has recognized international, global, futures, population and values education (all long established themes in social education) as imperatives in environmental education. Both social and environmental education seek to help young people identify, understand and desire to resolve the problems that confront humanity. As such, both social and environmental education:

- share similar affective, process and skill goals that emerge out of their knowledge bases;
- include observation of and participation in the school and the community as part of the curriculum;
- deal with critical issues that stem from our lifestyle and that can only be resolved by lifestyle adjustments;
- give students practice in and prepares them to make decisions in their adult life roles:
  depend upon inputs from several disciplines of knowledge and integrates them into a balanced program of studies.

Co-operation between teachers in these similar areas is rare, unfortunately. Many reasons may be posited for this, but included among them are the hegemonic curriculum activities of many school and system level decision makers (Maher, 1982) and the contextual educational structures they support.

However, even rarer is Australian research in social and environmental education. The control of postgraduate studies in education faculties by the foundation sociology, philosophy and psychology of education disciplines constrains postgraduate educational research in any but these areas. Also, subject-based curriculum studies lecturers in colleges and universities have seen their role to lie in pre-service teacher training almost exclusively, until just recently. These and other factors have restricted the amount, scope, depth and rigor of research in social and environmental education. The overall picture is one of useful fragments amongst a general failure to develop an adequate research base for effective decision making and curriculum planning.

Samples of these "fragments" will be reviewed briefly, later in this paper, but it is to the United States and Britain, where at least research in social education is relatively well established, that we must look for broader directions. Generalisations drawn from the application of such research to environmental education and cross-culturally to Australia would be tenuous ones. However, the point to be made in relation to them is that we just simply do not know whether such generalisations would be true for Australian conditions or not. In the words of Herman (1980), social and environmental education number amongst their adherents many good people who have made important contributions, but they lack sufficient numbers of serious scholars with an interest in and energy for research. An increasing amount of research is being undertaken, but we lack a number of important conditions for a concerted research thrust. Among the missions conditions are:

1. A wide network of interested researchers with whom to negotiate and share research problems, themes and methods.
2. Criteria for the identification of significant and needed areas of research in social and environmental education.
3. Journals in social and environmental education with a tradition of stringent refereeing to encourage research of quality and a sense of audience for writers.
4. Encouragement for replicative studies to establish the reliability and generalisation of results obtained in "one shot" studies.
5. Teacher perception and confidence that the research will be of practical use to them in the classroom.

Australia's small and scattered population is a major contributing factor to this situation. There is just not large enough pool of researchers to justify specialist journals and research associations. Additionally, many people in the field are spread so very thinly over a variety of interests (of necessity) that specialist research of any depth is not possible. It is for this reason that the recently formed Australian Social Education and Environmental Education Associations should work closely together. Each had a major national conference in 1982 and 1984 and two new journals, of which this is one, are likely to result. It is crucial that efforts be made to encourage both groups to co-operate in the timing, location and themes of their conferences so that participants can attend both every two years. Maybe, consideration can be given to periodic joint and/or "end-on" conferences. The co-operation could extend to

the joint sponsorship of a monograph series so that research in social and environmental education may be fostered.

Research in social and environmental education may be organised in six categories (Figure 1) with research in the core area of the history and philosophy of social and environmental education supported by research in the five areas of: Students, Curriculum, Teaching, Learning and the Diffusion of New Ideas. Perhaps, the frame could represent the societal and environmental context in which teaching and learning occurs, and could be considered another important area of research.

A review of research in each of these areas is a major need in Australia at the present time. Research in social and environmental education in Australia will continue its fragmented path, lacking both the necessary overview for the establishment of criteria for further research and touchstones to evaluate the relevance of related overseas research, without it.
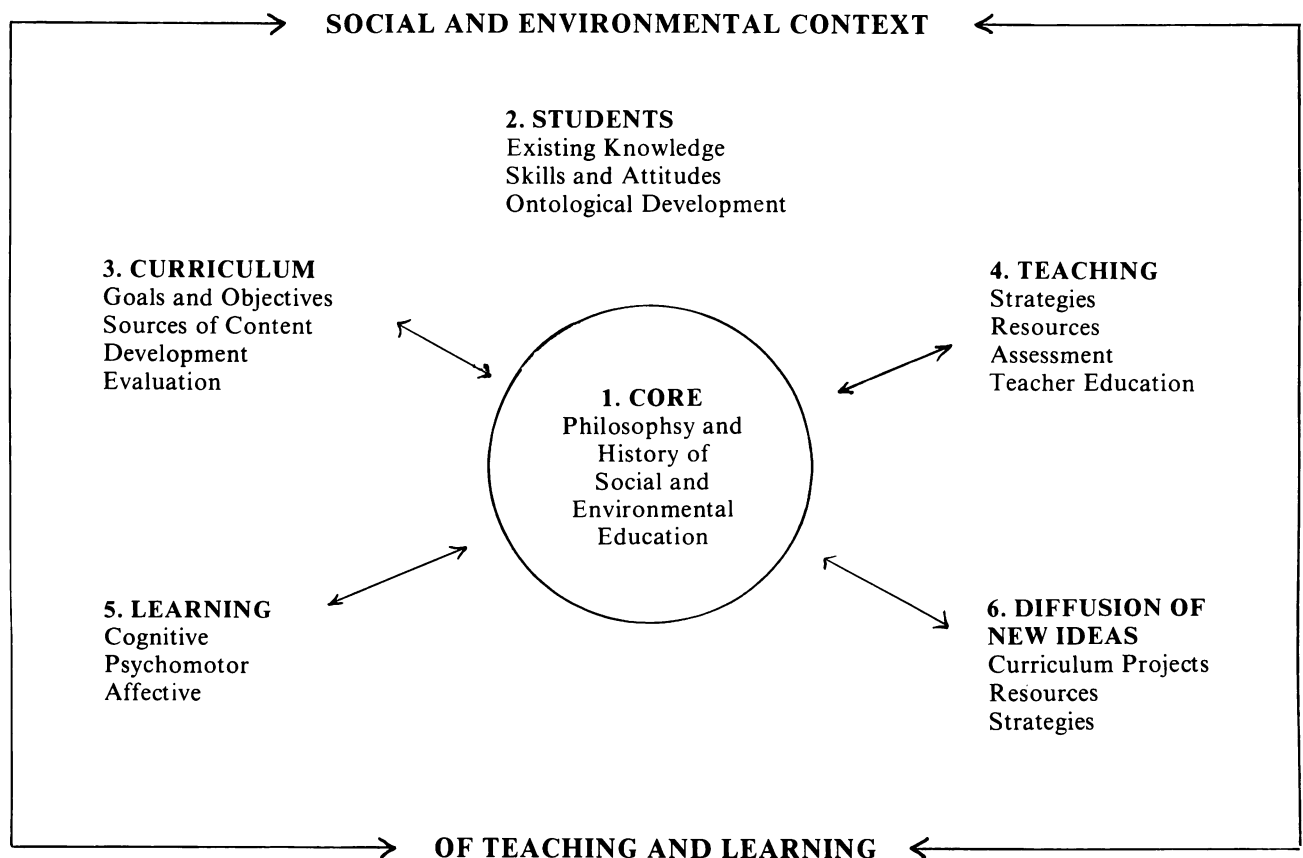
Five of the six areas are receiving the attention of researchers in Australia. (The exception seems to be the diffusion of new ideas). It is possible to briefly note some examples of research in the five areas to illustrate the diversity of perspectives, themes and methodologies evident in the last five years. One point that will emerge from the examples is the strong subject-orientation of teaching and research in the area. The examples selected reflect my own biases, values and interests. It is possible that they reflect my ignorance rather than gaps in the field of research in social and environmental education in Australia. But such are the risks in any selection activity.

Research on philosophy and history of social and environmental education. Studies of the place of these concerns in the curriculum, sociological and philosophical justifications for this, past patterns and projected trends are included in this category. Examples include Bryant's (1980) history of geography teaching in Victoria, this author on the relation of geography to the affective goals of environmental education (Fien, 1981) and Hall (1981) on the nature of theory and practice in geographical education. Little has been done on social or environmental education, per se.

Research on students seeks to obtain information on the predispositions and facilities of students to learn. It probably contains the most empirically based studies in the area, being heavily dependent on the work of psychologists. Five examples illustrate the breadth of research undertaken: Collis and Bigg (1979) on the structure of student thinking; Gerber (1981) and Wilson (1981) on the development of cartographic language and map reasoning (respectively) by children; Stringer (1981) on spatial conceptualisation; and Fien, Wilson and Slater (1982) on the local area place, knowledge and feelings of Year 7 studentes.

Research on curriculum includes consideration of the goals and objectives of social and environmental education, sources of content, curriculum development and evaluation. Research here is of variable quality and is illustrated in the confused methodologies and lack of rigour in the evaluation of the Queensland secondary syllabuses, Study of Society, (Muller, 1982) compared to the quality of similar evaluation by Bartlett (1978) of

Figure 1: Categories of Research in Social and Environmental Education (after Ehman and Hahn, (1980).

SOCIAL AND ENVIRONMENTAL CONTEXT

2. STUDENTS
Existing Knowledge
Skills and Attitudes
Ontological Development

3. CURRICULUM
Goals and Objectives
Sources of Content
Development
Evaluation

4. TEACHING
Strategies
Resources
Assessment
Teacher Education

1. CORE
Philosophsy and History of Social and Environmental Education

5. LEARNING
Cognitive
Psychomotor
Affective

6. DIFFUSION OF NEW IDEAS
Curriculum Projects
Resources
Strategies

OF TEACHING AND LEARNING

a syllabus on Studies in Physical Geography. Also significant in this category of research is Maher's (1982) application of the sociology of knowledge to the future place of environmental education in secondary schools.

Research on teaching has a focus on the effects of the roles of teachers and the resources and strategies they select. Grosvenor (reported in Fensham, 1982) for example, has evaluated the use of the simulation game, Paradise Island, and found empirical evidence which supports the suspicions voiced by Fien and Slater (1981) on the ineffectiveness of role play in much teaching. Other valuable research on teaching takes textbooks as its focus. Hutton (1983) has exposed the ideological bias of many history textbooks especially in the presentation of aborigines, Australians at war, and the Anzac tradition. Williamson (1982) has identified similar conservative values and bias in some materials on Comalco at Weipa. A project to investigate racist, sexist and ageist bias in textbooks is currently in progress (Fien, 1982).

Research on learning seeks to identify ways to best teach particular knowledge, skills and valuing processes. Whitehead's (1978) development of a research-verified procedure for teaching inquiry processes is particularly important for teachers of social and environmental education, as is Piper's (1979) ACER sponsored study of social learning at school in Australia.

Research on the diffusion of new ideas is not well developed. We know very little about the diffusion, effects and curent usage of the many products of Schools Commission and CDC projects. It is important that we identify the variables that explain why one school or teacher incorporates new ideas into a program while others resist them. It is to be hoped evaluation studies of this type are not curtailed with the current low levels of education spending.

Readers are invited to consider these examples of research in social and environmental education, and to report briefly on their research in the area in later issues of this journal. Discussion and action are also urgent on the need for a detailed review of the relevant research, finding ways of sponsoring this, identifying criteria for the identification of research needs and future directions. In this way, this journal may serve to create a network of researchers and teachers in social and environmental education among whom ideas for research, report drafts for comment, and results will be shared.

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