

Right answers or wrong problems? Towards a theory of change for environmental learning

Stephen Gough

Stephen Gough is a member of the Centre for Research in Education and the Environment of the University of Bath. He is also Director of Studies for Advanced Courses in the Department of Education. Contact ja href="mailto:S.R.Gough@bath.ac.uk" S.R.Gough@bath.ac.uk/a.
--

Introduction

Much has been written in the attempt to establish appropriate content, processes and pedagogies for environmental learning, and to argue for the superiority of some approaches to others. One may say that this is a contested field of study. It has been so since (at least) the sharp academic debate which took place in the late 1980s and early 1990s, pitting a (then) dominant group of environmental education researchers wedded to a positivistic methodology against another group informed by socially critical theory and post-structuralism.¹ These groups were divided not only by their methodological views but perhaps more fundamentally, and certainly quite explicitly, on ideological grounds.² As this debate has continued and developed, one aspect of it has been the attempt to establish particular definitions of terms such as “environmental education,” or “education for sustainable development” as the social scientific equivalent of industry standards, that is, as definitions which everyone everywhere uses. Such definitions are often associated with acronyms such as EE or ESD, which then tend to trip somewhat uncritically off the tongue, or to become slogans. An early discussion of possible objections to attempts at definitional standardization is found in the work of Ian Robotom.³ On the other hand, one can argue with equal force that a field incapable of establishing agreed definitions of its most basic terminology seems unlikely to make any other sort of progress.

In this paper I use the term “environmental learning” as a catch-all phrase to include learning by anyone, at any age, which bears with it, in some way, upon non-human nature and human relationships. By doing so, I do not mean to set myself above a debate which has, in fact, been rather productive in many ways, nor (heaven forbid) to propose an industry standard terminological definition of my own. Rather, I do so because I want to talk about work in this wide field of study in a very inclusive way.

However, there is one type of educational work that, though it very clearly lies within the scope of my definition of environmental learning, is not part of the subject matter I wish to discuss. There are practitioners of environmental education (this might well be the term they would use themselves) whose concern is not really with social-policy issues but, rather, with sharing the joy they themselves derive from the natural world with other individuals, and hence improving learners' lives. These educators are not primarily or directly trying to save the planet or avert environmental catastrophe, though the prevalence of this sort of rhetoric means that they are quite likely to use it sometimes, and what they actually do may well be thought useful by those who do believe that the planet is in grave danger. Teachers like these are valuable beyond measure, but they are not the subject of this paper which is concerned with the deliberate deployment of environmental learning as a vehicle of social policy. I would only add that such teachers do not really need a theory of social change, and should probably beware of anyone trying to sell them one.

The literature of the field as a whole, however, has generally tended to have a strong focus on the achievement of social change, typically through education's supposed capacity to enable more-or-less radical action by individual citizens or groups of citizens. More recently, a particular strand within this approach has acquired a measure of influence within global institutions. This has resulted, for example, in UNESCO's *Teaching and Learning for a Sustainable Future* project, and in debate about the proper status of learners within policy initiatives that make use of education.⁴

Of course, it is not only those with predominantly environmental concerns who have seen education as a means of achieving their social goals. Of particular interest here are those writers with a broader but by no means unconnected focus on education and social policy as a whole, who have argued that meaningful social progress depends on developing new ways of learning in a changed and still-changing world. For Brown and Lauder,⁵ for example, there is now an historic choice to be made between market individualism and "the principles of collective intelligence" as the basis of society. These authors argue for "a proper balance between competition and cooperation, which recognizes our mutual dependence on society" and, following Giddens,⁶ for "social reflexivity." The problem, as it is seen in this account, is a similar one to that identified by some environmental educators, though perhaps more widely conceived.

However, it is not at all clear whether or how any sort of learning leads, in any predictable or manageable way, to large-scale social change.⁷ Learning always takes place within a pre-existing context of power relations, rules, expectations, historical narratives, and perceptions of group and individual interests, which affect not only what learners learn, but what they think it is important to learn and why. In these circumstances, a theory of social change through learning seems indispensable. In relation to environmental learning, we might conceive of such a theory at one of three levels.

First, we might suppose that all that is needed is an appropriate educational technology for the solution to social and environmental problems that are themselves well understood. For example, we might think that the problem is to create an environmentally literate citizenry, thus assuming, at the minimum, both that it is possible to know what environmentally literate means, and that countries are run by their citizens. This has been the view taken by the positivist school in environmental education, which is most particularly represented by the work of Harold Hungerford and his associates.

Second, we might suppose that the social and environmental problems in question are not well understood by most people, but are capable of being understood. What is therefore needed is an educational technology through which learners will come to understand the problems properly. This is the broad case with which the socially critical theorists challenged the positivists during the debate of the late 1980s and early 1990s to which I have already alluded. This debate, in a variety of adapted forms, still rumbles on. It is often couched in terms of a perceived need for a new paradigm to replace an existing one, though it should be noted that the notions of necessity, newness, and paradigmaticness implicit in this sort of case are jointly and severally open to challenge.

Finally we might ask whether anyone really understands what the problems are, given the manifest and numerous uncertainties that surround both environmental and educational processes. If not, we might further ask whether the most profitable course of action might be to entertain simultaneously a number of different and competing problem definitions. This possibility has received relatively little attention by environmental-education researchers. Elsewhere, among writers on environmental and risk management for example, it has been a significant focus of research.⁸ What it suggests for educational technology is an approach which confronts learners with the (often competing) problem definitions used by others, and prompts them to reflect upon the different definitions of particular problems they themselves employ at different times, in different contexts, and in different social roles. An example of such an educational approach in practice has been described by Gough and Scott.⁹

In the remainder of this paper, I first set out a possible framework for thinking about the origins of different problem definitions in the context of environmental learning, and then apply this framework to the notion of sustainable development as an objective of social policy, arguing that as this term is often conceived it exercises an essentially conservative influence. Finally, I identify a further conceptual obstacle to the achievement of radical change and outline the beginnings of an approach to change through learning that might eventually address these issues.

Learning and social policy problems: a possible framework

Education itself, and social policy (which in turn includes both educational and environmental policy), each relate both to *practices* and to *institutions* as these terms are distinguished by MacIntyre.¹⁰ For example, teaching and working in any capacity on social projects, are practices. Schools, universities, government ministries, NGOs, think-tanks, and so on are all institutions. As MacIntyre points out, institutions are necessarily concerned with the acquisition of external goods in order to sustain themselves and the practices which they promote. Just as the artist must eat in order to paint, so even the most high-minded institution must compete for funds and favours in order to pursue its good works.

The above typology has been extended by Reid.¹¹ Writing, in this instance, about age-related class enrolment, he notes:

Once such things achieve social and cultural significance, they acquire a life of their own. They become institutionalized in a dual sense. They need institutions to preserve them, but they also *become* institutions in the more elusive sense of an idea that is integral to a culture and seen as significant by most of its members. Being in the third grade becomes an important defining characteristic of a person — as does being a third grade teacher.

We might therefore distinguish *organizational institutions* from *cultural institutions*. For example, in Western society at least, the division of knowledge into tightly defined segments with descriptors like biology and sociology has become a cultural institution in Reid's sense. Where two such segments seek to explain the same thing (competitive behaviour, for example), what ensues is typically less like a scholarly debate and more like an inter-institutional stand-off. This is not just because these disciplines see different solutions, but because each sees a different problem — and thinks its own way of defining that problem to be self-evidently the only (or best) one. Thomas Kuhn understood this perfectly:

One of the things a scientific community acquires with a paradigm is a criterion for choosing problems that, while the paradigm is taken for granted, can be assumed to have solutions. To a great extent these are the only problems that the community will admit as scientific.¹²

Organizational institutions (such as associations of biologists or sociologists) may enhance their standing and promote the practices they favour by successfully encouraging popular deference to particular cultural institutions (sound science might be an example of such a cultural institution in relation to sustainability, for example). Their success in doing so will depend, in turn, upon

their success in competing for resources (real, financial, and cultural), forming alliances, and distributing rewards effectively. What this seems to make quite clear is that discussions about the forms educational practices could or should take cannot be separated from discussions about how organizational institutions involved with knowledge production and learning are managed and how they interact.

An approach that echoes much of the above is that of Kemmis and Fitzclarence¹³ who, building on the work of Popkewitz and his associates, identify three “registers of social formation.” These find their expression through *organizations* (broadly equivalent to organizational institutions), *practices*, and *language*. Education and social policy are clearly both aspects of social formation. To take account of the dimension of language, I propose the addition of the concept of *literacy* to the model. I would argue that this, together with practices, organizational institutions, and cultural institutions, forms an appropriate set of conceptual categories for thinking about environmental learning and social policy (Figure 1).

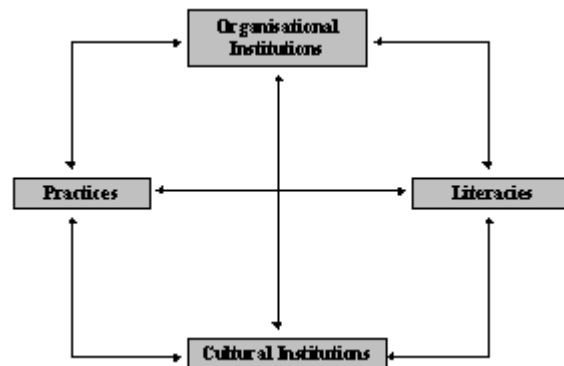


Figure 1: A Model of Categories of Social Influences on Environmental Learning and Social Policy. (Gough and Scott, 2001)

As noted by Stables and Bishop,¹⁴ the term literacy is often used in a careless and imprecise way to signify particular desired consequences of education, or curriculum goals. Examples include scientific literacy, economic literacy, technological literacy, and of course environmental literacy. The question of whether all these different literacies are compatible with each other, or whether, for example, scientific literacy (as popularly understood, at least) needs to be unlearned before environmental literacy can be learned¹⁵ has engaged environmental educators for some time.

Stables and Bishop argue for a more rigorous usage of literacy. They write:

The biophysical environment is laden with potential meaning. To accept this implies that everything can be treated as text, and it is on this basis that the broadest view of literacy rests. Furthermore, as literary theory has long since abandoned the idea that written texts merely mean what the author intended — so the argument that no human agency obviously “wrote” the natural world is no impediment, theoretically, to its being seen as text.

It will be noted that all the examples of kinds of literacy mentioned above concern human relations with the biophysical environment. One can think of different approaches to the content and processes of education as attempts to promote different literacies — different ways of reading the world. These literacies (of which there are many) will not necessarily have human relations with the natural world as their central concern, but they will almost certainly impact on such relations. They will embody a human perspective, that is, tend to be anthropocentric rather than ecocentric. Further, when the newly-literate learner applies his or her learning through *practices*, those practices will (to a greater or a lesser extent) contribute to a re-writing of the text called Environment. Both this process of writing, and the subsequent re-reading of the modified environmental text by the same and other social actors, will be mediated through organizational and cultural institutions (which simultaneously both contribute to the re-writing, and may themselves be variously reconceptualized in the process) and by the biogeophysical properties of the natural world.

To illustrate, consider the example of a hypothetical stretch of tropical coastline that has hitherto been little visited by outsiders and that supports a small local population. This place, considered as a text, will be read quite differently by an economist, a biologist, an engineer, a Western travel writer, and a local poet and songwriter. The first three mentioned, at least, will have been trained (by an organizational institution) to read environments in particular ways. Each will be influenced in the form of their reading by the organizational institutions to which they belong (say, in the case of the economist, a private firm or a government department) and the cultural institutions by which they are influenced (to take the example of the economist again: value-for-money, or GDP growth). Their readings may be in conflict. Which of them subsequently, through their practices, influences events the most and so has the greatest input into the rewriting of the environment is likely to be decided not by the force of their respective arguments but by the power of their respective organizational institutions (of which their arguments are but one resource). However, it is their different arguments, and different forms of argument, that are likely to seem a proper focus for the design of any educational or policy interventions.

If, subsequently, the economist’s cost-benefit analysis is influential in a decision to build a tourist hotel complex, this will constitute a major re-writing of the environment. However, the resulting text will be different from that originally envisaged in any plan. This is because the environment will unquestionably

change in ways that have not been fully predicted by anyone. Like life itself, environmental issues are characterized not only by uncertainty but also by “irreducible ignorance and the related concepts of surprise and novelty.”¹⁶ These changes will themselves then be read by each of our five actors in ways which, once more, reflect the particular literacy they bring to bear in conjunction with their institutional affiliations. As before, none of them will be wrong. A learning or policy initiative focused exclusively on any one of their literacies would *not* be useless. It would merely be incomplete in two ways: because it ignored the other literacies and because it failed to engage with the influence of institutions.

Learning and sustainable development

At the time of writing, the most powerful conjunction of environmental learning and social policy relates to sustainable development; a term that now appears in the National Curriculum for England and Wales, and in the policy-related statements of organizations of many different kinds. It has become a cultural institution.

Sustainable-development education has an officially sponsored body, the Sustainable Development Education Panel (SDEP), to promote it. Sustainable development is explicitly conceptualised by both panel and government¹⁷ as having three dimensions: the economic, the social, and the environmental. This view is illustrated diagrammatically in *Figure 2*.

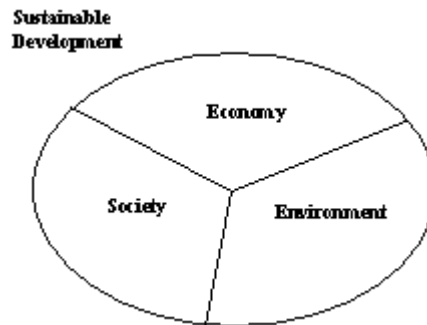


Figure 2: A common conceptualization of sustainable development.

Complex tasks always need to be broken up in some way if they are to be managed. The division into economic, social, and environmental components is one approach to the complex task of achieving sustainable development. What should be clear, however, is that:

1. there may be other ways of doing this, and

2. this particular way of doing it supports, and is supported by, a strong coalition of existing institutions, practices, and literacies. From the points of view of these institutions, practices, and literacies, therefore, *the three-segment view of sustainable development is deeply conservative* in the sense that it accords with their existing ways of thinking and organizing.

To take these two points in order, the three-way division of sustainable development is an artefact of human thought, not an innate property of sustainable development itself. It is not, in fact, possible to have an economy (sustainable or otherwise) without a society and an environment. It is not possible to have a society without an environment or, in any sense meaningful in the modern world, an economy. Most significantly perhaps, while it may be possible to have an environment without a society or an economy, it is not possible to have *the* environment without these. It is *the* environment because of the significance it acquires for us through our building of social and economic relationships within it. Without humans there can be no grounds for preferring the present environment (itself an artefact of long-term human management) to any other. This means, I suggest, that an educational approach of great potential, and one broadly consistent with the models of social learning advanced by Brown and Lauder and others, such as Elliott¹⁸ and Young,¹⁹ is to ask the question: What are the common elements of economy, society and environment? In the present context this might be rephrased as: What constitutes the lines in *Figure 2*?

Whatever their potential educational power, however, these questions have little currency in the context of contemporary educational and social policy formation. This brings us to the second point above. Discrete literacies (for example those of the economist, the sociologist, and the biologist) exist to focus on, and extol the central importance of, their own particular segment of concern. This is true whatever organizational institution the specialists in question work for, whether it is, for example, a mining company, an environmental NGO, or a government agency. Hence, whilst protagonists to the debate about sustainable development may disagree strongly about *solutions*, they share an interest in seeing the *problem* in one particular way. Further, each literacy supports and is supported by a set of practices, and these in turn are consistent with the way organizational institutions organize themselves (so, for example, governments have ministries of finance, of environment, of development). School curricula are organized into subjects that are defined by existing literacies, and prioritized by policy-makers on the basis of needs identified in relation to existing institutional structures, both organizational and cultural. Students who are successful are inducted into appropriate practices.

To say this is essentially to re-state a point made by Schwab:²⁰ that it is bordering on the impossible to explain new ways of thinking to people who are themselves equipped only with the old ways. This is particularly true when those same people presently earn a living by applying the old ways of thinking, and available language is strongly adapted to the old way of thinking.

If we re-draw the lines in *Figure 2* in different places we should expect to struggle to find a shared terminology to describe the new, different segments which result. If we then devise such a terminology to our own satisfaction we should then expect to have it rubbished by others who have an interest in keeping things as they are.

Collective intelligence: competition and cooperation

The above analysis might be objected to on the basis that though it appears to leave little room for genuinely radical change, yet there is evidence from many quarters of a desire for such change. For example, a number of proposals centred around the idea of a learning society continue to gain ground. One such is Brown and Lauder's appeal to collective intelligence. As we have seen, this identifies balance between competition and cooperation as a key part of a possible way forward for learning, and for social policy generally.

Returning to *Figure 2*, it is clear that this dichotomy between competition and cooperation has been a major influence on the way in which problems relating to all three segments have been defined in Western thought. We might say that the notion that there is a fundamental opposition between the competitive and the cooperative is a well-established cultural institution in Western society. In two segments — those of economy and society — one can argue that the cooperative view of what is a good thing has been substantially marginalized at the time of writing, leaving advocates of caring, sharing egalitarianism struggling to put humpty-dumpty back together again. Nevertheless, in relation to economy and society, it is the struggle between competitive and cooperative approaches that dominates most accounts of recent history. Meanwhile, in our conceptualization of the environment, the tension between competition and cooperation continues to loom large. Ross²¹ identifies Malthusian and Romantic views of Nature which are at the same time both contradictory and socially pervasive. The first sees the environment as a site of scarcity, predation, and warfare. The second sees it as a place of diversity and interdependence.

To point this out is not to say that the separation of complex objects of thought according to whether they appear to be competitive or cooperative is wrong in itself. It is a potentially useful analytical device. What has happened, however, is that this distinction has become, in Western thought, the basis of two competing, overarching meta-literacies. These have sometimes been referred to as worldviews²² and are often associated with the sorts of claims made about paradigms noted earlier.

Those literacies and practices which favour policies such as the promotion of social learning and sustainable development, and those institutional contexts which provide them with a home tend, at present, to be those that are most disposed to favour cooperative solutions as a matter of principle. At a meta-level

they lie broadly within what we might now term the “cooperative worldview.” This should not be surprising, since sustainable development and social learning are responses to problem-definitions that those persons and groups disposed to value competition-based solutions are less likely to acknowledge. To propose balanced solutions from this starting point is perhaps not entirely unhelpful, but on all sides there is a need to consider alternative ways of defining the problems if effective social learning is to occur.

A tentative conclusion: in favour of imbalance

I have suggested that there is educational merit in encouraging learners to re-think the categories by which society typically analyses its inter-relationships with the non-human world, and that doing this might advance our understanding of what being sustainable might mean. One obstacle is the inertia possessed by existing institutions, practices, and literacies. A second is the existence of a form of meta-literacy that takes for granted the appropriateness of competition and cooperation as categories of social analysis and, so, tends to group diverse organizational institutions, cultural institutions, literacies, and practices into coherent worldviews that are seen necessarily to stand in opposition to each other. I have argued that this entire conceptual edifice is ultimately deeply conservative, because it locks us endlessly into the same debates.

Whether a search for balanced solutions is an appropriate response is therefore open to question. It depends on how this metaphor of “balance” is viewed: on what theory of society underpins it. In the natural world, plants and animals are both interdependent and in competition, full-on, all the time. In social affairs individuals and groups plot and scheme even as they form alliances and keep their promises. Economic actors cooperate with some to compete with others. Returning to the three possible levels of a theory of social change through learning identified in the introduction to this paper, I would argue that:

- The special challenge for environmental learning is not to promote particular solutions to well-understood problems of social and environmental policy, because these problems are typically *not* well understood.
- Frequently, such problems are not capable of being well understood, at least for the foreseeable future. Nor is it likely to be helpful to promote “balance” in policy-making between solutions which address different problem definitions. Balance is not possible between two people sitting on different see-saws. Further, if the problem definitions in question are those of too much competition versus too little competition then perhaps, to persist with my metaphor, it is time to look what’s new in the playground.
- What environmental learning may be able to do is help us understand

how others and ourselves construct environmental problems (and opportunities) in particular ways, depending on our particular contexts of institutions, practices, and literacies, and on the ways in which these interact with our biogeophysical surroundings over time.

This is not to dismiss scientific disciplines or ideological belief. It is to promote thinking about why we think as we do, and how we might see things afresh.

References

- Brown, P. and H. Lauder. 2001. *Capitalism and Social Progress: the future of society in a global economy*, Basingstoke: Palgrave.
- DETR. 1999. *Sustainable Development Education Panel First Annual Report*. London: UK Government.
- Elliott, J. 1998. *The Curriculum Experiment: Meeting the Challenge of Social Change*. Buckingham: Open University Press.
- Fien, J. 1993. *Education for the Environment: Critical Curriculum Theorising and Environmental Education*. Geelong: Deakin University Press.
- Fien, J. 2000. "Education for the environment: a critique' - an analysis." *Environmental Education Research*. Vol. 6, No. 2, pp. 179-192.
- Giddens, A. 1994. *Beyond Left and Right: the future of radical politics*. Cambridge: Polity Press.
- Gilligan, C. 1982. *In a different voice : psychological theory and women's development*. Cambridge, MA: Harvard University Press.
- Gough, S. and W. Scott. 1999. "Education and training for sustainable tourism: problems, possibilities and cautious first steps." *Canadian Journal of Environmental Education*. Vol. 4, pp. 193-212.
- Greenall Gough, A. 1993. *Founders in Environmental Education*. Geelong: Deakin University Press.
- Hungerford, H., R. Peyton and R. Wilke. 1980. "Goals for curriculum development in environmental education." *Journal of Environmental Education*. Vol. 11, No. 3, pp. 42-47, reprinted in: Greenall Gough, A. 1993. *Founders in Environmental Education*, Geelong: Deakin University Press, pp. 69-81.
- Hungerford, H., R. Peyton and R. Wilke. 1983. "Yes, EE does have definition and structure." *Journal of Environmental Education*. Vol. 14, No. 3, pp. 1-2.
- Hungerford, H. and T. Volk. 1990. "Changing learner behaviour through environmental education." *Journal of Environmental Education*. Vol. 21, No. 3, pp. 8-21.
- Jickling, B. 1992. "Why I don't want my children to be educated for sustainable development." *Journal of Environmental Education*. Vol. 23, No. 4, pp. 5-8.
- Jickling, B. and H. Spork. 1998. "Education for the environment: a critique." *Environmental Education Research*. Vol. 4, No. 3, pp. 309-329.

- Kemmis, S. and L. Fitzclarence. 1986. *Curriculum Theorising: Beyond Reproduction Theory*. Geelong: Deakin University Press.
- Kerry Turner, R., I. Lorenzoni, N. Beaumont, I.J. Bateman, I.H. Langford and A.L. McDonald. 1998. "Coastal management for sustainable development: Analysing environmental and socio economic changes on the UK coast." *The Geographical Journal*. Vol. 164, No. 3, pp. 269-281.
- Kuhn, T.S. 1962/1996. *The Structure of Scientific Revolutions*, 3rd edition. Chicago: University of Chicago Press.
- Levin, H.M. and C. Kelley. 1997. "Can education do it alone?" in: A.H. Halsey, H. Lauder, P. Brown and A. Stuart Wells, eds. *Education: Culture, Economy, Society*. Oxford: Oxford University Press, pp. 240-252.
- Lijdt, R. and L. Frewer. 1998. *Risk and Modern Society*. London: Earthscan.
- MacIntyre, A. 1981. *After Virtue: A Study in Moral Theory*. London: Duckworth.
- Mrazek, R. ed. 1993. *Alternative Paradigms in Environmental Education Research*. Troy, OH: NAAEE.
- Reid, W.A. 1999. *Curriculum as Institution and Practice: Essays in the Deliberative Tradition*. Mahwah NJ: Lawrence Erlbaum.
- Robottom, I. 1987. "Contestation and consensus in environmental education." *Curriculum Perspectives*, Vol. 7, No. 1, pp. 23-26.
- Robottom, I. 1993. "Beyond behaviourism: making EE research educational." in: Mrazek, R. ed. *Alternative Paradigms in Environmental Education*, Troy, OH: North American Association for Environmental Education. pp. 133-144.
- Robottom, I. and P. Hart. 1993. *Research in Environmental Education: Engaging the Debate*. Geelong: Deakin University Press.
- Ross, A. 1994. *The Chicago Gangster Theory of Life: nature's debt to society*. London: Verso.
- Schwab, J.J. 1978. "The 'impossible' role of the teacher in progressive education." in: I. Westbury and N.J. Wilkof, eds. *Science, Curriculum and Liberal Education*. Chicago: University of Chicago Press, pp. 170-171.
- Skolimowski, H. 1981. *Eco-philosophy: Designing New Tactics for Living*. Boston: MA: Marion Boyars.
- Skolimowski, H. 1982. "Knowledge and values." *The Ecologist*. Vol. 5, No. 1,

pp. 8-15.

Stables, A. and K. Bishop. 2001. "Weak and strong conceptions of environmental literacy: implications for environmental education." *Environmental Education Research*. Vol. 7, No. 1, pp. 89-97.

Thompson, M. 1990. "Policy Making in the Face of Uncertainty." *Concepts of the Environment in the Social Sciences: Readings*. London: University of London, Wye College, pp.161-187.

Thompson, M. 1997. "Security and solidarity: an anti-reductionist framework for thinking about the relationship between us and the rest of nature." *The Geographical Journal*. Vol. 163, No. 2, pp. 141-149.

Young, M.F.D. 1998. *The Curriculum of the Future: From the 'New Sociology of Education' to a Critical Theory of Learning*. London: Falmer Press.

Endnotes

1. Robottom 1987; Robottom 1993; Robottom and Hart 1993; Hungerford, Peyton and Wilke 1980; Hungerford, Peyton and Wilke 1983; Hungerford and Volk 1990; Greenall Gough 1993; Mrazek 1993.
2. Fien 1993
3. Robottom 1987
4. Jickling 1992; Jickling and Spork 1998; Fien 2000.
5. Brown and Lauder 2001
6. Giddens 1994
7. Levin and Kelley 1997.
8. Thompson 1990; Thompson 1997; Löfstedt and Frewer 1998
9. Gough and Scott 1999
10. MacIntyre 1981
11. Reid 1999, 111
12. Kuhn 1962/1996
13. Kemmis and Fitzclarence 1986
14. Stables and Bishop 2001
15. Greenall Gough 1993
16. Kerry Turner et al. 1998
17. DETR 1999
18. Elliott 1998
19. Young 1998
20. Schwab 1978
21. Ross 1994
22. For example: Skolimowski 1981; Skolimowski 1982; Robottom and Hart 1993; Fien 1993; Gilligan 1982